

GenCore version 5.1.6
Copyright (c) 1993 - 2004 Compugen Ltd.

OM protein - protein search, using sw model

Run on: March 18, 2004, 06:15:34 ; Search time 36.7883 Seconds
(without alignments)
492.734 Million cell updates/sec

Title: US-10-066-009A-1
Perfect score: 385
Sequence: 1 GPETLCAELVDALQVCGD.....SDDLRLRLRYCAPLKPAAKSA 70

Scoring table: BLOSUM62
Gapop 10.0 , Capext 0.5

Searched: 1049977 seqs, 258955339 residues
Total number of hits satisfying chosen parameters: 1049977

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

- Database : Published Applications AA:*
1: /cgn2_6/ptodata/1/pubpaa/US07_PUBCOMB.pep.*
2: /cgn2_6/ptodata/1/pubpaa/PCT_NEW_PUB.pep.*
3: /cgn2_6/ptodata/1/pubpaa/US06_NEW_PUB.pep.*
4: /cgn2_6/ptodata/1/pubpaa/US06_PUBCOMB.pep.*
5: /cgn2_6/ptodata/1/pubpaa/US07_NEW_PUB.pep.*
6: /cgn2_6/ptodata/1/pubpaa/PCTUS_PUBCOMB.pep.*
7: /cgn2_6/ptodata/1/pubpaa/US08_NEW_PUB.pep.*
8: /cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep.*
9: /cgn2_6/ptodata/1/pubpaa/US09A_PUBCOMB.pep.*
10: /cgn2_6/ptodata/1/pubpaa/US09B_PUBCOMB.pep.*
11: /cgn2_6/ptodata/1/pubpaa/US09C_PUBCOMB.pep.*
12: /cgn2_6/ptodata/1/pubpaa/US09_NEW_PUB.pep.*
13: /cgn2_6/ptodata/1/pubpaa/US10A_PUBCOMB.pep.*
14: /cgn2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep.*
15: /cgn2_6/ptodata/1/pubpaa/US10C_PUBCOMB.pep.*
16: /cgn2_6/ptodata/1/pubpaa/US10_NEW_PUB.pep.*
17: /cgn2_6/ptodata/1/pubpaa/US60_NEW_PUB.pep.*
18: /cgn2_6/ptodata/1/pubpaa/US60_PUBCOMB.pep.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Table with columns: Result No., Score, Query Match, Length, DB ID, Description. Contains 18 rows of search results.

Table with columns: Hit No., Score, Query Match, Length, DB ID, Description. Contains 45 rows of search results.

ALIGNMENTS

RESULT 1
US-09-848-664-29
; Sequence 29, Application US/09848664
; Patent No. US20020146414A1
; GENERAL INFORMATION:
; APPLICANT: Sakiyama-Elbert, Shelly E.
; APPLICANT: Hubbell, Jeffrey A.
; TITLE OF INVENTION: Controlled Release of No. US20020146414A1-Heparin Binding Growth
; FILE REFERENCE: Factors from Heparin Containing Matrices
; CURRENT APPLICATION NUMBER: US/09/848,664
; PRIOR FILING DATE: 2001-05-03
; PRIOR APPLICATION NUMBER: 09/298,084
; NUMBER OF SEQ ID NOS: 31
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 29
; LENGTH: 70
; TYPE: PRT
; ORGANISM: Homo sapiens
; US-09-848-664-29

Query Match 100.0%; Score 385; DB 9; Length 70;
Best Local Similarity 100.0%; Pred. No. 2.9e-40;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPETLCAELVDALQVCGDGRGFYFNKPTGYGSSRRRAPQTGIVDECCFRSCDLRRLRY 60
DB 1 GPETLCAELVDALQVCGDGRGFYFNKPTGYGSSRRRAPQTGIVDECCFRSCDLRRLRY 60
QY 61 CAPLKPAAKSA 70
DB 61 CAPLKPAAKSA 70

RESULT 2
US-09-848-664-30
; Sequence 30, Application US/09848664

Patent No. US20020146414A1
 GENERAL INFORMATION:
 APPLICANT: Sakiyama-Elbert, Shelly E.
 APPLICANT: Hubbell, Jeffrey A.
 TITLE OF INVENTION: Controlled Release of No. US20020146414A1-Heparin Binding Growth Factors from Heparin Containing Matrices
 FILE REFERENCE: ETH 108
 CURRENT APPLICATION NUMBER: US/09/848,664
 PRIOR FILING DATE: 2001-05-03
 PRIOR APPLICATION NUMBER: 09/298,084
 PRIOR FILING DATE: 1999-04-22
 NUMBER OF SEQ ID NOS: 31
 SOFTWARE: PatentIn Ver. 2.1
 SEQ ID NO 30
 LENGTH: 70
 TYPE: PRT
 ORGANISM: Homo sapiens
 US-09-848-664-30

Query Match 100.0%; Score 385; DB 9; Length 70;
 Best Local Similarity 100.0%; Pred. No. 2.9e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPETLGAELVDALQVCGDRGFYFNKPTGYGSSRRRAPQTGIVDECCFRSCDLRRLRLEY 60
 Db 1 GPETLGAELVDALQVCGDRGFYFNKPTGYGSSRRRAPQTGIVDECCFRSCDLRRLRLEY 60

Qy 61 CAPLKPAKSA 70
 Db 61 CAPLKPAKSA 70

RESULT 3
 US-09-903-327A-8
 Sequence 8, Application US/09903327A
 Patent No. US20020164333A1
 GENERAL INFORMATION:
 APPLICANT: Nemerow, Glen R.
 APPLICANT: Li, Erlguang
 TITLE OF INVENTION: BIFUNCTIONAL MOLECULES AND VECTORS COMPLEXED THEREWITH FOR TARGETED DELIVERY
 TITLE OF INVENTION: GENE
 FILE REFERENCE: 22908-1228
 CURRENT APPLICATION NUMBER: US/09/903,327A
 CURRENT FILING DATE: 2001-07-10
 PRIOR APPLICATION NUMBER: 09/613,017
 PRIOR FILING DATE: 2000-07-10
 NUMBER OF SEQ ID NOS: 33
 SOFTWARE: Fast-Seq for Windows Version 4.0
 SEQ ID NO 8
 LENGTH: 70
 TYPE: PRT
 ORGANISM: Human
 FEATURE:
 NAME/KEY: PEPTIDE
 LOCATION: (0)...(0)
 OTHER INFORMATION: Human Insulin-like Growth Factor 1 sequence
 OTHER INFORMATION: (IGF-1, mature peptide)
 US-09-903-327A-8

Query Match 100.0%; Score 385; DB 9; Length 70;
 Best Local Similarity 100.0%; Pred. No. 2.9e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPETLGAELVDALQVCGDRGFYFNKPTGYGSSRRRAPQTGIVDECCFRSCDLRRLRLEY 60
 Db 1 GPETLGAELVDALQVCGDRGFYFNKPTGYGSSRRRAPQTGIVDECCFRSCDLRRLRLEY 60

Qy 61 CAPLKPAKSA 70
 Db 61 CAPLKPAKSA 70

RESULT 4
 US-09-858-935B-3
 Sequence 3, Application US/09858935B
 Publication No. US20030069177A1
 GENERAL INFORMATION:
 APPLICANT: Dubaquié, Yves
 APPLICANT: Lowman, Henry B.
 TITLE OF INVENTION: METHOD FOR TREATING CARTILAGE DISORDERS
 FILE REFERENCE: P1794R1
 CURRENT APPLICATION NUMBER: US/09/858,935B
 CURRENT FILING DATE: 2002-07-02
 PRIOR APPLICATION NUMBER: US 60/248,985
 PRIOR FILING DATE: 2000-11-15
 PRIOR APPLICATION NUMBER: US 60/204,490
 PRIOR FILING DATE: 2000-05-16
 NUMBER OF SEQ ID NOS: 153
 SEQ ID NO 3
 LENGTH: 70
 TYPE: PRT
 ORGANISM: Homo sapiens
 US-09-858-935B-3

Query Match 100.0%; Score 385; DB 10; Length 70;
 Best Local Similarity 100.0%; Pred. No. 2.9e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPETLGAELVDALQVCGDRGFYFNKPTGYGSSRRRAPQTGIVDECCFRSCDLRRLRLEY 60
 Db 1 GPETLGAELVDALQVCGDRGFYFNKPTGYGSSRRRAPQTGIVDECCFRSCDLRRLRLEY 60

Qy 61 CAPLKPAKSA 70
 Db 61 CAPLKPAKSA 70

RESULT 5
 US-10-444-649-1
 Sequence 1, Application US/10444649
 Publication No. US20040033951A1
 GENERAL INFORMATION:
 APPLICANT: Dubaquié, Yves
 APPLICANT: Lowman, Henry
 TITLE OF INVENTION: PROTEIN VARIANTS
 FILE REFERENCE: P1712R1
 CURRENT APPLICATION NUMBER: US/10/444,649
 CURRENT FILING DATE: 2003-05-22
 PRIOR APPLICATION NUMBER: US/09/724,479
 PRIOR FILING DATE: 2000-11-28
 PRIOR APPLICATION NUMBER: US/09/477,923
 PRIOR FILING DATE: 2000-01-05
 NUMBER OF SEQ ID NOS: 6
 SEQ ID NO 1
 LENGTH: 70
 TYPE: PRT
 ORGANISM: Homo sapiens
 US-10-444-649-1

Query Match 100.0%; Score 385; DB 12; Length 70;
 Best Local Similarity 100.0%; Pred. No. 2.9e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPETLGAELVDALQVCGDRGFYFNKPTGYGSSRRRAPQTGIVDECCFRSCDLRRLRLEY 60
 Db 1 GPETLGAELVDALQVCGDRGFYFNKPTGYGSSRRRAPQTGIVDECCFRSCDLRRLRLEY 60

Qy 61 CAPLKPAKSA 70
 Db 61 CAPLKPAKSA 70

; Sequence 1, Application US/10444701
 ; Publication No. US20040033952A1
 ; GENERAL INFORMATION:
 ; APPLICANT: Dubaque, Yves
 ; TITLE OF INVENTION: PROTEIN VARIANTS
 ; CURRENT APPLICATION NUMBER: US/10/444,701
 ; FILE REFERENCE: P1712R1
 ; PRIOR FILING DATE: 2003-05-22
 ; PRIOR APPLICATION NUMBER: US/09/723,866
 ; PRIOR FILING DATE: 2000-11-28
 ; PRIOR APPLICATION NUMBER: US/09/477,923
 ; PRIOR FILING DATE: 2000-01-05
 ; NUMBER OF SEQ ID NOS: 6
 ; SEQ ID NO 1
 ; LENGTH: 70
 ; TYPE: PRT
 ; ORGANISM: Homo sapiens
 ; US-10-444-701-1

Query Match 100.0%; Score 385; DB 12; Length 70;
 Best Local Similarity 100.0%; Pred. No. 2.9e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPETLCAELVDALQVCGDRGFYFNKPTGYGSSRRAPOTGIVDECCFRSDDLRLRLRY 60
 Db 1 GPETLCAELVDALQVCGDRGFYFNKPTGYGSSRRAPOTGIVDECCFRSDDLRLRLRY 60

Qy 61 CAPLKPAKSA 70
 Db 61 CAPLKPAKSA 70

RESULT 7
 US-10-028-410-1
 ; Sequence 1, Application US/10028410
 ; Publication No. US20020160955A1
 ; GENERAL INFORMATION:
 ; APPLICANT: Dubaque, Yves
 ; TITLE OF INVENTION: PROTEIN VARIANTS
 ; FILE REFERENCE: P1712R1-1
 ; CURRENT APPLICATION NUMBER: US/10/028,410
 ; CURRENT FILING DATE: 2001-12-19
 ; PRIOR APPLICATION NUMBER: US/09/477,924
 ; PRIOR FILING DATE: 2000-01-05
 ; NUMBER OF SEQ ID NOS: 6
 ; SEQ ID NO 1
 ; LENGTH: 70
 ; TYPE: PRT
 ; ORGANISM: Homo sapiens
 ; US-10-028-410-1

Query Match 100.0%; Score 385; DB 13; Length 70;
 Best Local Similarity 100.0%; Pred. No. 2.9e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPETLCAELVDALQVCGDRGFYFNKPTGYGSSRRAPOTGIVDECCFRSDDLRLRLRY 60
 Db 1 GPETLCAELVDALQVCGDRGFYFNKPTGYGSSRRAPOTGIVDECCFRSDDLRLRLRY 60

Qy 61 CAPLKPAKSA 70
 Db 61 CAPLKPAKSA 70

RESULT 8
 US-10-066-009A-1
 ; Sequence 1, Application US/10066009A
 ; Publication No. US20020165155A1
 ; GENERAL INFORMATION:
 ; APPLICANT: Schaffer, Michelle
 ; APPLICANT: Ullsch, Mark

; APPLICANT: Vajdos, Felix
 ; TITLE OF INVENTION: CRYSTALLIZATION OF IGF-1
 ; FILE REFERENCE: P1869R1
 ; CURRENT APPLICATION NUMBER: US/10/066,009A
 ; CURRENT FILING DATE: 2002-06-24
 ; PRIOR APPLICATION NUMBER: US 60/287,072
 ; PRIOR FILING DATE: 2001-04-27
 ; PRIOR APPLICATION NUMBER: US 60/267,977
 ; PRIOR FILING DATE: 2001-02-09
 ; NUMBER OF SEQ ID NOS: 5
 ; SEQ ID NO 1
 ; LENGTH: 70
 ; TYPE: PRT
 ; ORGANISM: Homo sapiens
 ; US-10-066-009A-1

Query Match 100.0%; Score 385; DB 13; Length 70;
 Best Local Similarity 100.0%; Pred. No. 2.9e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPETLCAELVDALQVCGDRGFYFNKPTGYGSSRRAPOTGIVDECCFRSDDLRLRLRY 60
 Db 1 GPETLCAELVDALQVCGDRGFYFNKPTGYGSSRRAPOTGIVDECCFRSDDLRLRLRY 60

Qy 61 CAPLKPAKSA 70
 Db 61 CAPLKPAKSA 70

RESULT 9
 US-10-136-639-1
 ; Sequence 1, Application US/101366639
 ; Publication No. US20030072761A1
 ; GENERAL INFORMATION:
 ; APPLICANT: Lebowitz, Jonathan
 ; TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR TARGETING PROTEINS ACROSS THE BLOO
 ; FILE REFERENCE: SYM-008
 ; CURRENT APPLICATION NUMBER: US/10/136,639
 ; CURRENT FILING DATE: 2002-09-06
 ; PRIOR APPLICATION NUMBER: US 60/323,650
 ; PRIOR FILING DATE: 2001-10-16
 ; NUMBER OF SEQ ID NOS: 4
 ; SOFTWARE: PatentIn version 3.0
 ; SEQ ID NO 1
 ; LENGTH: 70
 ; TYPE: PRT
 ; ORGANISM: Homo sapiens
 ; US-10-136-639-1

Query Match 100.0%; Score 385; DB 14; Length 70;
 Best Local Similarity 100.0%; Pred. No. 2.9e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPETLCAELVDALQVCGDRGFYFNKPTGYGSSRRAPOTGIVDECCFRSDDLRLRLRY 60
 Db 1 GPETLCAELVDALQVCGDRGFYFNKPTGYGSSRRAPOTGIVDECCFRSDDLRLRLRY 60

Qy 61 CAPLKPAKSA 70
 Db 61 CAPLKPAKSA 70

RESULT 10
 US-10-136-841-7
 ; Sequence 7, Application US/10136841
 ; Publication No. US20030082176A1
 ; GENERAL INFORMATION:
 ; APPLICANT: Lebowitz, Jonathan
 ; APPLICANT: Beverley, Stephen
 ; TITLE OF INVENTION: SUBCELLULAR TARGETING OF THERAPEUTIC PROTEINS
 ; FILE REFERENCE: SYM-007
 ; CURRENT APPLICATION NUMBER: US/10/136,841

Qy 61 CAPLPAKSA 70
Db 61 CAPLPAKSA 70

RESULT 14
US-10-444-262-1
; Sequence 1, Application US/10444262
; Publication No. US20040023893A1
; GENERAL INFORMATION:
; APPLICANT: Dubaquitte, Yves
; APPLICANT: Lowman, Henry
; TITLE OF INVENTION: PROTEIN VARIANTS
; FILE REFERENCE: P1712R1
; CURRENT APPLICATION NUMBER: US/10/444,262
; CURRENT FILING DATE: 2003-05-22
; PRIOR APPLICATION NUMBER: US/09/724,478
; PRIOR FILING DATE: 2000-11-28
; PRIOR APPLICATION NUMBER: US/09/477,923
; PRIOR FILING DATE: 2000-01-05
; NUMBER OF SEQ ID NOS: 6
; SEQ ID NO 1
; LENGTH: 70
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-444-262-1

Query Match 100.0%; Score 385; DB 16; Length 70;
Best Local Similarity 100.0%; Pred. No. 2.9e-40;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPETLCAELVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLEY 60
Db 1 GPETLCAELVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLEY 60

Qy 61 CAPLPAKSA 70
Db 61 CAPLPAKSA 70

RESULT 15
US-09-852-261-10
; Sequence 10, Application US/09852261
; Patent No. US20020083477A1
; GENERAL INFORMATION:
; APPLICANT: GOLDSPIK, GEOFFREY
; APPLICANT: TERENGI, GIORGIO
; TITLE OF INVENTION: REPAIR OF NERVE DAMAGE
; FILE REFERENCE: 117-351
; CURRENT APPLICATION NUMBER: US/09/852,261
; CURRENT FILING DATE: 2001-05-10
; PRIOR FILING DATE: 2000-05-10
; NUMBER OF SEQ ID NOS: 14
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 10
; LENGTH: 105
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-852-261-10

Query Match 100.0%; Score 385; DB 9; Length 105;
Best Local Similarity 100.0%; Pred. No. 4.6e-40;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPETLCAELVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLEY 60
Db 1 GPETLCAELVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLEY 60

Qy 61 CAPLPAKSA 70
Db 61 CAPLPAKSA 70

RESULT 16
US-10-238-114-3
; Sequence 3, Application US/10238114
; Publication No. US20030100073A1
; GENERAL INFORMATION:
; APPLICANT: Merial
; APPLICANT: ANDREONI, Christine Michele
; TITLE OF INVENTION: IGF-1 AS FELINE VACCINE ADJUVANT, IN PARTICULAR AGAINST FELINE I
; FILE REFERENCE: 454313-3165.1
; CURRENT APPLICATION NUMBER: US/10/238,114
; CURRENT FILING DATE: 2002-09-10
; PRIOR APPLICATION NUMBER: FR 01 11736
; PRIOR FILING DATE: 2001-09-11
; PRIOR APPLICATION NUMBER: US 60/318,666
; PRIOR FILING DATE: 2001-09-12
; NUMBER OF SEQ ID NOS: 20
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 3
; LENGTH: 105
; TYPE: PRT
; ORGANISM: Felis catus
US-10-238-114-3

Query Match 100.0%; Score 385; DB 14; Length 105;
Best Local Similarity 100.0%; Pred. No. 4.6e-40;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPETLCAELVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLEY 60
Db 1 GPETLCAELVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLEY 60

Qy 61 CAPLPAKSA 70
Db 61 CAPLPAKSA 70

RESULT 17
US-09-852-261-2
; Sequence 2, Application US/09852261
; Patent No. US20020083477A1
; GENERAL INFORMATION:
; APPLICANT: GOLDSPIK, GEOFFREY
; APPLICANT: TERENGI, GIORGIO
; TITLE OF INVENTION: REPAIR OF NERVE DAMAGE
; FILE REFERENCE: 117-351
; CURRENT APPLICATION NUMBER: US/09/852,261
; CURRENT FILING DATE: 2001-05-10
; PRIOR FILING DATE: 2000-05-10
; NUMBER OF SEQ ID NOS: 14
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 2
; LENGTH: 110
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-852-261-2

Query Match 100.0%; Score 385; DB 9; Length 110;
Best Local Similarity 100.0%; Pred. No. 4.8e-40;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPETLCAELVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLEY 60
Db 1 GPETLCAELVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLEY 60

Qy 61 CAPLPAKSA 70
Db 61 CAPLPAKSA 70

RESULT 18
US-09-852-261-2
; Sequence 2, Application US/09852261
; Patent No. US20020083477A1
; GENERAL INFORMATION:
; APPLICANT: GOLDSPIK, GEOFFREY
; APPLICANT: TERENGI, GIORGIO
; TITLE OF INVENTION: REPAIR OF NERVE DAMAGE
; FILE REFERENCE: 117-351
; CURRENT APPLICATION NUMBER: US/09/852,261
; CURRENT FILING DATE: 2001-05-10
; PRIOR FILING DATE: 2000-05-10
; NUMBER OF SEQ ID NOS: 14
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 2
; LENGTH: 110
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-852-261-2

Query Match 100.0%; Score 385; DB 9; Length 110;
Best Local Similarity 100.0%; Pred. No. 4.8e-40;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPETLCAELVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLEY 60
Db 1 GPETLCAELVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLEY 60

Qy 61 CAPLPAKSA 70
Db 61 CAPLPAKSA 70

RESULT 19
US-09-852-261-2
; Sequence 2, Application US/09852261
; Patent No. US20020083477A1
; GENERAL INFORMATION:
; APPLICANT: GOLDSPIK, GEOFFREY
; APPLICANT: TERENGI, GIORGIO
; TITLE OF INVENTION: REPAIR OF NERVE DAMAGE
; FILE REFERENCE: 117-351
; CURRENT APPLICATION NUMBER: US/09/852,261
; CURRENT FILING DATE: 2001-05-10
; PRIOR FILING DATE: 2000-05-10
; NUMBER OF SEQ ID NOS: 14
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 2
; LENGTH: 110
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-852-261-2

Query Match 100.0%; Score 385; DB 9; Length 110;
Best Local Similarity 100.0%; Pred. No. 4.8e-40;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPETLCAELVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLEY 60
Db 1 GPETLCAELVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLEY 60

Qy 61 CAPLPAKSA 70
Db 61 CAPLPAKSA 70

RESULT 20
US-09-852-261-2
; Sequence 2, Application US/09852261
; Patent No. US20020083477A1
; GENERAL INFORMATION:
; APPLICANT: GOLDSPIK, GEOFFREY
; APPLICANT: TERENGI, GIORGIO
; TITLE OF INVENTION: REPAIR OF NERVE DAMAGE
; FILE REFERENCE: 117-351
; CURRENT APPLICATION NUMBER: US/09/852,261
; CURRENT FILING DATE: 2001-05-10
; PRIOR FILING DATE: 2000-05-10
; NUMBER OF SEQ ID NOS: 14
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 2
; LENGTH: 110
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-852-261-2

Query Match 100.0%; Score 385; DB 9; Length 110;
Best Local Similarity 100.0%; Pred. No. 4.8e-40;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPETLCAELVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLEY 60
Db 1 GPETLCAELVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLEY 60

Qy 61 CAPLPAKSA 70
Db 61 CAPLPAKSA 70

US-10-179-046-14
 ; Sequence 14, Application US/10179046
 ; Publication No. US2003001315441
 ; GENERAL INFORMATION:
 ; APPLICANT: Crawford, Kenneth
 ; Zaror, Isabel
 ; Imnis, Michael
 ; TITLE OF INVENTION: Pichia Secretary Leader for Protein
 ; Expression
 ; NUMBER OF SEQUENCES: 40
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: Chiron Corporation
 ; STREET: 4560 Horton Street
 ; CITY: Emeryville
 ; STATE: California
 ; COUNTRY: United States
 ; ZIP: 94608
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: Floppy disk
 ; COMPUTER: IBM PC compatible
 ; OPERATING SYSTEM: PC-DOS/MS-DOS
 ; SOFTWARE: Patent In Release #1.0, Version #1.30
 ; CURRENT APPLICATION DATA: US/10/179,046
 ; APPLICATION NUMBER:
 ; FILING DATE: 25-Jun-2002
 ; CLASSIFICATION: <Unknown>
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: US/09/029,267
 ; FILING DATE: <Unknown>
 ; ATTORNEY/AGENT INFORMATION:
 ; NAME: Chung, Ling-Pong
 ; REGISTRATION NUMBER: 36,482
 ; REFERENCE/DOCKET NUMBER: 1165.100
 ; TELECOMMUNICATION INFORMATION:
 ; TELEPHONE: (510) 601-2704
 ; TELEFAX: (510) 655-3542
 ; INFORMATION FOR SEQ ID NO: 14:
 ; SEQUENCE CHARACTERISTICS:
 ; LENGTH: 118 amino acids
 ; TYPE: amino acid
 ; STRANDEDNESS: single
 ; TOPOLOGY: linear
 ; MOLECULE TYPE: protein
 ; SEQUENCE DESCRIPTION: SEQ ID NO: 14:

Query Match 100.0%; Score 385; DB 14; Length 118;
 Best Local Similarity 100.0%; Pred. No. 5.2e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 GPETLCGAEYLDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRLEY 60
 Db 49 GPETLCGAEYLDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRLEY 108
 QY 61 CAPLKPAKSA 70
 Db 109 CAPLKPAKSA 118

Query Match 100.0%; Score 385; DB 14; Length 137;
 Best Local Similarity 100.0%; Pred. No. 6.2e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 GPETLCGAEYLDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRLEY 60
 Db 33 GPETLCGAEYLDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRLEY 92
 QY 61 CAPLKPAKSA 70
 Db 93 CAPLKPAKSA 102

RESULT 20
 US-09-919-497-74
 ; Sequence 74, Application US/09919497
 ; Patent No. US20020106682A1
 ; GENERAL INFORMATION:
 ; APPLICANT: Mütter, George L.
 ; TITLE OF INVENTION: PROGNOSTIC CLASSIFICATION OF ENDOMETRIAL CANCER
 ; FILE REFERENCE: B0801/7225
 ; CURRENT APPLICATION NUMBER: US/09/919,497
 ; CURRENT FILING DATE: 2001-07-31
 ; PRIOR APPLICATION NUMBER: US 60/221,735
 ; PRIOR FILING DATE: 2000-07-31
 ; NUMBER OF SEQ ID NOS: 100
 ; SOFTWARE: Patent in version 3.0
 ; SEQ ID NO 74
 ; LENGTH: 153
 ; TYPE: PRT
 ; ORGANISM: Homo sapiens
 ; US-09-919-497-74

Query Match 100.0%; Score 385; DB 9; Length 153;
 Best Local Similarity 100.0%; Pred. No. 7e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 GPETLCGAEYLDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRLEY 60
 Db 49 GPETLCGAEYLDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRLEY 108
 QY 61 CAPLKPAKSA 70
 Db 109 CAPLKPAKSA 118

Query Match 100.0%; Score 385; DB 9; Length 153;
 Best Local Similarity 100.0%; Pred. No. 7e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 GPETLCGAEYLDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRLEY 60
 Db 49 GPETLCGAEYLDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRLEY 108
 QY 61 CAPLKPAKSA 70
 Db 109 CAPLKPAKSA 118

RESULT 21
 US-10-136-639-3
 ; Sequence 3, Application US/10136639
 ; Publication No. US20030072761A1
 ; GENERAL INFORMATION:
 ; APPLICANT: Lebowitz, Jonathan
 ; TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR TARGETING PROTEINS ACROSS THE BLOOD
 ; FILE REFERENCE: SYM-008
 ; CURRENT APPLICATION NUMBER: US/10/136,639
 ; CURRENT FILING DATE: 2002-09-06
 ; PRIOR APPLICATION NUMBER: US 60/329,650
 ; PRIOR FILING DATE: 2001-10-16
 ; NUMBER OF SEQ ID NOS: 4
 ; SOFTWARE: Patent in version 3.0
 ; SEQ ID NO 3
 ; LENGTH: 153

Query Match 100.0%; Score 385; DB 9; Length 153;
 Best Local Similarity 100.0%; Pred. No. 7e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 GPETLCGAEYLDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRLEY 60
 Db 49 GPETLCGAEYLDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRLEY 108
 QY 61 CAPLKPAKSA 70
 Db 109 CAPLKPAKSA 118

Query Match 100.0%; Score 385; DB 9; Length 153;
 Best Local Similarity 100.0%; Pred. No. 7e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 GPETLCGAEYLDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRLEY 60
 Db 49 GPETLCGAEYLDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRLEY 108
 QY 61 CAPLKPAKSA 70
 Db 109 CAPLKPAKSA 118

US-10-179-046-14
 ; Sequence 14, Application US/10179046
 ; Publication No. US2003001315441
 ; GENERAL INFORMATION:
 ; APPLICANT: Crawford, Kenneth
 ; Zaror, Isabel
 ; Imnis, Michael
 ; TITLE OF INVENTION: Pichia Secretary Leader for Protein
 ; Expression
 ; NUMBER OF SEQUENCES: 40
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: Chiron Corporation
 ; STREET: 4560 Horton Street
 ; CITY: Emeryville
 ; STATE: California
 ; COUNTRY: United States
 ; ZIP: 94608
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: Floppy disk
 ; COMPUTER: IBM PC compatible
 ; OPERATING SYSTEM: PC-DOS/MS-DOS
 ; SOFTWARE: Patent In Release #1.0, Version #1.30
 ; CURRENT APPLICATION DATA: US/10/179,046
 ; APPLICATION NUMBER:
 ; FILING DATE: 25-Jun-2002
 ; CLASSIFICATION: <Unknown>
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: US/09/029,267
 ; FILING DATE: <Unknown>
 ; ATTORNEY/AGENT INFORMATION:
 ; NAME: Chung, Ling-Pong
 ; REGISTRATION NUMBER: 36,482
 ; REFERENCE/DOCKET NUMBER: 1165.100
 ; TELECOMMUNICATION INFORMATION:
 ; TELEPHONE: (510) 601-2704
 ; TELEFAX: (510) 655-3542
 ; INFORMATION FOR SEQ ID NO: 14:
 ; SEQUENCE CHARACTERISTICS:
 ; LENGTH: 118 amino acids
 ; TYPE: amino acid
 ; STRANDEDNESS: single
 ; TOPOLOGY: linear
 ; MOLECULE TYPE: protein
 ; SEQUENCE DESCRIPTION: SEQ ID NO: 14:

Query Match 100.0%; Score 385; DB 14; Length 118;
 Best Local Similarity 100.0%; Pred. No. 5.2e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 GPETLCGAEYLDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRLEY 60
 Db 49 GPETLCGAEYLDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRLEY 108
 QY 61 CAPLKPAKSA 70
 Db 109 CAPLKPAKSA 118

Query Match 100.0%; Score 385; DB 14; Length 137;
 Best Local Similarity 100.0%; Pred. No. 6.2e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 GPETLCGAEYLDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRLEY 60
 Db 33 GPETLCGAEYLDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRLEY 92
 QY 61 CAPLKPAKSA 70
 Db 93 CAPLKPAKSA 102

RESULT 20
 US-09-919-497-74
 ; Sequence 74, Application US/09919497
 ; Patent No. US20020106682A1
 ; GENERAL INFORMATION:
 ; APPLICANT: Mütter, George L.
 ; TITLE OF INVENTION: PROGNOSTIC CLASSIFICATION OF ENDOMETRIAL CANCER
 ; FILE REFERENCE: B0801/7225
 ; CURRENT APPLICATION NUMBER: US/09/919,497
 ; CURRENT FILING DATE: 2001-07-31
 ; PRIOR APPLICATION NUMBER: US 60/221,735
 ; PRIOR FILING DATE: 2000-07-31
 ; NUMBER OF SEQ ID NOS: 100
 ; SOFTWARE: Patent in version 3.0
 ; SEQ ID NO 74
 ; LENGTH: 153
 ; TYPE: PRT
 ; ORGANISM: Homo sapiens
 ; US-09-919-497-74

Query Match 100.0%; Score 385; DB 9; Length 153;
 Best Local Similarity 100.0%; Pred. No. 7e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 GPETLCGAEYLDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRLEY 60
 Db 49 GPETLCGAEYLDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRLEY 108
 QY 61 CAPLKPAKSA 70
 Db 109 CAPLKPAKSA 118

Query Match 100.0%; Score 385; DB 9; Length 153;
 Best Local Similarity 100.0%; Pred. No. 7e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 GPETLCGAEYLDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRLEY 60
 Db 49 GPETLCGAEYLDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRLEY 108
 QY 61 CAPLKPAKSA 70
 Db 109 CAPLKPAKSA 118

RESULT 21
 US-10-136-639-3
 ; Sequence 3, Application US/10136639
 ; Publication No. US20030072761A1
 ; GENERAL INFORMATION:
 ; APPLICANT: Lebowitz, Jonathan
 ; TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR TARGETING PROTEINS ACROSS THE BLOOD
 ; FILE REFERENCE: SYM-008
 ; CURRENT APPLICATION NUMBER: US/10/136,639
 ; CURRENT FILING DATE: 2002-09-06
 ; PRIOR APPLICATION NUMBER: US 60/329,650
 ; PRIOR FILING DATE: 2001-10-16
 ; NUMBER OF SEQ ID NOS: 4
 ; SOFTWARE: Patent in version 3.0
 ; SEQ ID NO 3
 ; LENGTH: 153

Query Match 100.0%; Score 385; DB 9; Length 153;
 Best Local Similarity 100.0%; Pred. No. 7e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 GPETLCGAEYLDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRLEY 60
 Db 49 GPETLCGAEYLDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRLEY 108
 QY 61 CAPLKPAKSA 70
 Db 109 CAPLKPAKSA 118

Query Match 100.0%; Score 385; DB 9; Length 153;
 Best Local Similarity 100.0%; Pred. No. 7e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 GPETLCGAEYLDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRLEY 60
 Db 49 GPETLCGAEYLDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRLEY 108
 QY 61 CAPLKPAKSA 70
 Db 109 CAPLKPAKSA 118

TYPE: PRT
ORGANISM: Homo sapiens
US-10-136-639-3

Query Match 100.0%; Score 385; DB 14; Length 153;
Best Local Similarity 100.0%; Pred. No. 7e-40;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

1 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLREMY 60
49 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLREMY 108
61 CAPLKPAKSA 70
109 CAPLKPAKSA 118

RESULT 22
US-10-238-114-2
Sequence 2, Application US/10238114
Publication No. US20030100073A1
GENERAL INFORMATION:
APPLICANT: Merial
APPLICANT: ANDREONI, Christine Michele
TITLE OF INVENTION: IGF-1 AS FELINE VACCINE ADJUVANT, IN PARTICULAR AGAINST FELINE RE
FILE REFERENCE: 454313-3165-1
CURRENT APPLICATION NUMBER: US/10/238,114
CURRENT FILING DATE: 2002-09-10
PRIOR APPLICATION NUMBER: FR 01 11736
PRIOR FILING DATE: 2001-09-11
PRIOR APPLICATION NUMBER: US 60/318,666
PRIOR FILING DATE: 2001-09-12
NUMBER OF SEQ ID NOS: 20
SOFTWARE: Patent in version 3.1
SEQ ID NO 2
LENGTH: 153
TYPE: PRT
ORGANISM: Felis catus
US-10-238-114-2

Query Match 100.0%; Score 385; DB 14; Length 153;
Best Local Similarity 100.0%; Pred. No. 7e-40;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

1 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLREMY 60
49 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLREMY 108
61 CAPLKPAKSA 70
109 CAPLKPAKSA 118

Best Local Similarity 100.0%; Pred. No. 7e-40;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

1 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLREMY 60
49 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLREMY 108
61 CAPLKPAKSA 70
109 CAPLKPAKSA 118

RESULT 24
US-09-921-398-39
Sequence 39, Application US/09921398
Patent No. US20020055169A1
GENERAL INFORMATION:
APPLICANT: Tekamp-Olson, Patricia
TITLE OF INVENTION: METHOD FOR EXPRESSION OF HETEROLOGOUS
PROTEINS IN YEAST
NUMBER OF SEQUENCES: 41
CORRESPONDENCE ADDRESS:
ADDRESS: Bell Seltzer IP Group of Alston & Bird, LLP
STREET: 3605 Glenwood Ave. Suite 310
CITY: Raleigh
STATE: NC
COUNTRY: US
ZIP: 27622
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent in Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/921,398
FILING DATE: 02-Aug-2001
CLASSIFICATION: <Unknown>
ATTORNEY/AGENT INFORMATION:
NAME: Spruill, W. Murray
REGISTRATION NUMBER: 32,943
REFERENCE/DOCKET NUMBER: 5784-4
TELECOMMUNICATION INFORMATION:
TELEPHONE: 919 420 2202
TELEFAX: 919 881 3175
INFORMATION FOR SEQ ID NO: 39:
SEQUENCE CHARACTERISTICS:
LENGTH: 155 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 39:
US-09-921-398-39

Query Match 100.0%; Score 385; DB 9; Length 155;
Best Local Similarity 100.0%; Pred. No. 7.1e-40;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

1 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLREMY 60
86 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLREMY 145
61 CAPLKPAKSA 70
146 CAPLKPAKSA 155

RESULT 25
US-10-280-826-39
Sequence 39, Application US/10280826
Publication No. US2003007831A1
GENERAL INFORMATION:
APPLICANT: Tekamp-Olson, Patricia
TITLE OF INVENTION: METHOD FOR EXPRESSION OF HETEROLOGOUS


```

US-10-280-826-41
Query Match      100.0%; Score 385; DB 14; Length 191;
Best Local Similarity 100.0%; Pred. No. 9e-40;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60
DB 86 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 145
QY 61 CAPLKPAKSA 70
DB 146 CAPLKPAKSA 155

RESULT 28
US-10-443-466A-20
; Sequence 20, Application US/10443466A
; Publication No. US20040018191A1
; GENERAL INFORMATION:
; APPLICANT: Wang, Ian
; APPLICANT: Pachter, Jonathan A
; APPLICANT: Hailey, Judith
; APPLICANT: Greenberg, Robert
; APPLICANT: Leonard, Presta
; APPLICANT: Brams, Peter
; APPLICANT: Feingersh, Diane
; APPLICANT: Williams, Denise
; APPLICANT: Srinivasan, Mohan
; TITLE OF INVENTION: NEUTRALIZING HUMAN ANTI-IGFR ANTIBODY
; FILE REFERENCE: OCO1533-K-US
; CURRENT APPLICATION NUMBER: US/10/443,466A
; CURRENT FILING DATE: 2003-05-22
; PRIOR APPLICATION NUMBER: 60/383,459
; PRIOR FILING DATE: 2002-05-24
; PRIOR APPLICATION NUMBER: 60/393,214
; PRIOR FILING DATE: 2002-07-02
; PRIOR APPLICATION NUMBER: 60/436,254
; PRIOR FILING DATE: 2002-12-23
; NUMBER OF SEQ ID NOS: 120
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 20
; LENGTH: 195
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-443-466A-20

Query Match      100.0%; Score 385; DB 15; Length 195;
Best Local Similarity 100.0%; Pred. No. 9.2e-40;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60
DB 49 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 108
QY 61 CAPLKPAKSA 70
DB 109 CAPLKPAKSA 118

RESULT 29
US-09-903-327A-12
; Sequence 12, Application US/09903327A
; Patent No. US20020164333A1
; GENERAL INFORMATION:
; APPLICANT: Nemerow, Glen R.
; APPLICANT: Li, Ezguang
; TITLE OF INVENTION: BIFUNCTIONAL MOLECULES AND VECTORS COMPLEXED THEREWITH FOR TARGET
; TITLE OF INVENTION: GENE
; TITLE OF INVENTION: DELIVERY
; FILE REFERENCE: 22908-1228
; CURRENT APPLICATION NUMBER: US/09/903,327A
; CURRENT FILING DATE: 2001-07-10

```

```

; PRIOR APPLICATION NUMBER: 09/613,017
; PRIOR FILING DATE: 2000-07-10
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 12
; LENGTH: 510
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Fusion protein with N-terminal portion of DAV-1 heavy chain
; OTHER INFORMATION: and IGF-1 mature peptide
US-09-903-327A-12

Query Match      100.0%; Score 385; DB 9; Length 510;
Best Local Similarity 100.0%; Pred. No. 2.7e-39;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60
DB 441 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 500
QY 61 CAPLKPAKSA 70
DB 501 CAPLKPAKSA 510

RESULT 30
US-10-241-596-14
; Sequence 14, Application US/10241596
; Publication No. US20030166239A1
; GENERAL INFORMATION:
; APPLICANT: Microbiological Research Authority
; APPLICANT: The Speywood Laboratory Limited
; TITLE OF INVENTION: Recombinant Toxin Fragments
; FILE REFERENCE: 1581.0130003
; CURRENT APPLICATION NUMBER: US/10/241,596
; CURRENT FILING DATE: 2002-09-12
; PRIOR APPLICATION NUMBER: US 09/255,829
; PRIOR FILING DATE: 1999-02-23
; PRIOR APPLICATION NUMBER: US 09/242,689
; PRIOR FILING DATE: 1999-02-23
; PRIOR APPLICATION NUMBER: PCT/GB97/02273
; PRIOR FILING DATE: 1997-08-22
; PRIOR APPLICATION NUMBER: US 08/782,893
; PRIOR FILING DATE: 1996-12-27
; PRIOR APPLICATION NUMBER: GB 9625996.5
; PRIOR FILING DATE: 1996-12-13
; PRIOR APPLICATION NUMBER: GB 9617671.4
; PRIOR FILING DATE: 1996-08-23
; NUMBER OF SEQ ID NOS: 175
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 14
; LENGTH: 953
; TYPE: PRT
; ORGANISM: Clostridium botulinum
US-10-241-596-14

Query Match      100.0%; Score 385; DB 14; Length 953;
Best Local Similarity 100.0%; Pred. No. 5.4e-39;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60
DB 882 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 941
QY 61 CAPLKPAKSA 70
DB 942 CAPLKPAKSA 951

RESULT 31
US-09-852-261-14
; Sequence 14, Application US/09852261

```

Patent No. US20020083477A1
 GENERAL INFORMATION:
 APPLICANT: GOLDSPIK, GEOFFREY
 APPLICANT: TERENCEHI, GIORGIO
 TITLE OF INVENTION: REPAIR OF NERVE DAMAGE
 FILE REFERENCE: 117-351
 CURRENT APPLICATION NUMBER: US/09/852,261
 PRIOR FILING DATE: 2001-05-10
 CURRENT APPLICATION NUMBER: GB 0011278.9
 PRIOR FILING DATE: 2000-05-10
 NUMBER OF SEQ ID NOS: 14
 SOFTWARE: PatentIn Ver. 2.1
 SEQ ID NO 14
 LENGTH: 105
 TYPE: PRT
 ORGANISM: Oryctolagus cuniculus
 US-09-852-261-14

Query Match 99.2%; Score 382; DB 9; Length 105;
 Best Local Similarity 98.6%; Pred. No. 1.1e-39;
 Matches 69; Conservative 1; Mismatches 0; Indels 0; Gaps 0;
 QY 1 GPEITCGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRLEY 60
 Db 1 GPEITCGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRLEY 60
 QY 61 CAPLKPAKSA 70
 Db 61 CAPLKPAKAA 70

RESULT 32
 US-09-852-261-6
 Sequence 6, Application US/09852261
 Patent No. US20020083477A1
 GENERAL INFORMATION:
 APPLICANT: GOLDSPIK, GEOFFREY
 APPLICANT: TERENCEHI, GIORGIO
 TITLE OF INVENTION: REPAIR OF NERVE DAMAGE
 FILE REFERENCE: 117-351
 CURRENT APPLICATION NUMBER: US/09/852,261
 PRIOR FILING DATE: 2001-05-10
 CURRENT APPLICATION NUMBER: GB 0011278.9
 PRIOR FILING DATE: 2000-05-10
 NUMBER OF SEQ ID NOS: 14
 SOFTWARE: PatentIn Ver. 2.1
 SEQ ID NO 6
 LENGTH: 111
 TYPE: PRT
 ORGANISM: Oryctolagus cuniculus
 US-09-852-261-6

Query Match 99.2%; Score 382; DB 9; Length 111;
 Best Local Similarity 98.6%; Pred. No. 1.2e-39;
 Matches 69; Conservative 1; Mismatches 0; Indels 0; Gaps 0;
 QY 1 GPEITCGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRLEY 60
 Db 1 GPEITCGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRLEY 60
 QY 61 CAPLKPAKSA 70
 Db 61 CAPLKPAKAA 70

RESULT 33
 US-10-323-046-42
 Sequence 42, Application US/10323046
 Publication No. US20030187232A1
 GENERAL INFORMATION:
 APPLICANT: Hubbell, Jeffrey A
 APPLICANT: Schense, Jason C
 APPLICANT: Sakiyama-Elbert, Shelly E

TITLE OF INVENTION: Growth Factor Modified Protein Matrices for Tissue
 TITLE OF INVENTION: Engineering
 FILE REFERENCE: ETH 107 CIP (2)
 CURRENT APPLICATION NUMBER: US/10/323,046
 CURRENT FILING DATE: 2002-12-17
 PRIOR APPLICATION NUMBER: 09/141,153
 PRIOR FILING DATE: 1998-08-27
 NUMBER OF SEQ ID NOS: 43
 SOFTWARE: PatentIn Ver. 3.1
 SEQ ID NO 42
 LENGTH: 91
 TYPE: PRT
 ORGANISM: Artificial sequence
 FEATURE:
 OTHER INFORMATION: Modified IGF 1 from Homo sapiens
 US-10-323-046-42

Query Match 98.2%; Score 378; DB 14; Length 91;
 Best Local Similarity 98.6%; Pred. No. 2.9e-39;
 Matches 69; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 QY 1 GPEITCGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRLEY 60
 Db 22 GPEITCGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRLEY 81
 QY 61 CAPLKPAKSA 70
 Db 82 CAPLKPAKSA 91

RESULT 34
 US-10-161-088-2
 Sequence 2, Application US/10161088
 Publication No. US2003007761A1
 GENERAL INFORMATION:
 APPLICANT: Parrow, Vendela
 APPLICANT: Rosengren, Linda
 TITLE OF INVENTION: NEW METHODS
 FILE REFERENCE: 13425-111001
 CURRENT APPLICATION NUMBER: US/10/161,088
 CURRENT FILING DATE: 2002-05-31
 PRIOR APPLICATION NUMBER: SE 0101934-8
 PRIOR FILING DATE: 2001-06-01
 NUMBER OF SEQ ID NOS: 3
 SOFTWARE: FastSeq for Windows Version 4.0
 SEQ ID NO 2
 LENGTH: 133
 TYPE: PRT
 ORGANISM: Homo sapiens
 US-10-161-088-2

Query Match 94.8%; Score 365; DB 14; Length 133;
 Best Local Similarity 94.3%; Pred. No. 1.8e-37;
 Matches 66; Conservative 1; Mismatches 3; Indels 0; Gaps 0;
 QY 1 GPEITCGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRLEY 60
 Db 23 GPEITCGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRLEY 82
 QY 61 CAPLKPAKSA 70
 Db 83 CAPLKPAKAA 92

RESULT 35
 US-09-852-261-12
 Sequence 12, Application US/09852261
 Patent No. US20020083477A1
 GENERAL INFORMATION:
 APPLICANT: GOLDSPIK, GEOFFREY
 APPLICANT: TERENCEHI, GIORGIO
 TITLE OF INVENTION: REPAIR OF NERVE DAMAGE
 FILE REFERENCE: 117-351

; CURRENT APPLICATION NUMBER: US/09/852,261
 ; CURRENT FILING DATE: 2001-05-10
 ; PRIOR APPLICATION NUMBER: GB 0011278.9
 ; PRIOR FILING DATE: 2000-05-10
 ; NUMBER OF SEQ ID NOS: 14
 ; SOFTWARE: Patent In Ver. 2.1
 ; SEQ ID NO 12
 ; TYPE: PRT
 ; ORGANISM: Rattus sp.
 ; US-09-852-261-12

Query Match 88.6%; Score 341; DB 9; Length 105;
 Best Local Similarity 90.0%; Pred. No. 1.4e-34;
 Matches 63; Conservative 0; Mismatches 7; Indels 0; Gaps 0;

Qy 1 GPTLCAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLEMY 60
 Db 1 GPTLCAELVDALQFVCGDRGFYFNKPTGYGSSIRRAQTGIVDECCFRSCLRLRLEMY 60
 Qy 61 CAPLKPAKSA 70
 Db 61 CVRCKPTKSA 70

RESULT 36
 ; US-09-852-261-4
 ; Sequence 4, Application US/09852261
 ; Patent No. US20020083477A1
 ; GENERAL INFORMATION:
 ; APPLICANT: GOLDSPIK, GJOFFREY
 ; APPLICANT: TERENCE, GIORGIO
 ; TITLE OF INVENTION: REPAIR OF NERVE DAMAGE
 ; FILE REFERENCE: 117-351
 ; CURRENT APPLICATION NUMBER: US/09/852,261
 ; CURRENT FILING DATE: 2001-05-10
 ; PRIOR APPLICATION NUMBER: GB 0011278.9
 ; PRIOR FILING DATE: 2000-05-10
 ; NUMBER OF SEQ ID NOS: 14
 ; SOFTWARE: Patent In Ver. 2.1
 ; SEQ ID NO 4
 ; LENGTH: 111
 ; TYPE: PRT
 ; ORGANISM: Rattus sp.
 ; US-09-852-261-4

Query Match 88.6%; Score 341; DB 9; Length 111;
 Best Local Similarity 90.0%; Pred. No. 1.4e-34;
 Matches 63; Conservative 0; Mismatches 7; Indels 0; Gaps 0;

Qy 1 GPTLCAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLEMY 60
 Db 1 GPTLCAELVDALQFVCGDRGFYFNKPTGYGSSIRRAQTGIVDECCFRSCLRLRLEMY 60
 Qy 61 CAPLKPAKSA 70
 Db 61 CVRCKPTKSA 70

RESULT 37
 ; US-10-339-740-218
 ; Sequence 218, Application US/10339740
 ; Publication No. US20030187246A1
 ; GENERAL INFORMATION:
 ; APPLICANT: Doberstein, Stephen
 ; APPLICANT: Reddy, Bindu
 ; APPLICANT: Platt, Darren
 ; APPLICANT: Ferguson, Kimberly
 ; TITLE OF INVENTION: NUCLEIC ACIDS AND PROTEINS OF C. ELEGANS INSULIN-LIKE GENES AND U
 ; FILE REFERENCE: 7326-069-999
 ; CURRENT APPLICATION NUMBER: US/10/339,740
 ; CURRENT FILING DATE: 2003-01-09

; PRIOR APPLICATION NUMBER: US/09/084,303A
 ; PRIOR FILING DATE: 1998-05-26
 ; NUMBER OF SEQ ID NOS: 298
 ; SOFTWARE: Patent In version 3.1
 ; SEQ ID NO 218
 ; LENGTH: 66
 ; TYPE: PRT
 ; ORGANISM: Homo sapiens
 ; FEATURE:
 ; NAME/KEY: misc feature
 ; LOCATION: (30)-(37)
 ; OTHER INFORMATION: Xaa = Any amino Acid
 ; US-10-339-740-218

Query Match 82.3%; Score 317; DB 14; Length 68;
 Best Local Similarity 85.7%; Pred. No. 8.1e-32;
 Matches 60; Conservative 0; Mismatches 8; Indels 2; Gaps 1;

Qy 1 GPTLCAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLEMY 60
 Db 1 GPTLCAELVDALQFVCGDRGFYFNKPTG--XXXXXXXXXQIGIVDECCFRSCLRLRLEMY 58
 Qy 61 CAPLKPAKSA 70
 Db 59 CAPLKPAKSA 68

RESULT 38
 ; US-10-066-009A-5
 ; Sequence 5, Application US/10066009A
 ; Publication No. US20020165155A1
 ; GENERAL INFORMATION:
 ; APPLICANT: Schaffer, Michelle
 ; APPLICANT: Ultsch, Mark
 ; APPLICANT: Vajdos, Felix
 ; TITLE OF INVENTION: CRYSTALLIZATION OF IGF-1
 ; FILE REFERENCE: P1869R1
 ; CURRENT APPLICATION NUMBER: US/10/066,009A
 ; CURRENT FILING DATE: 2002-06-24
 ; PRIOR APPLICATION NUMBER: US 60/287,072
 ; PRIOR FILING DATE: 2001-04-27
 ; PRIOR APPLICATION NUMBER: US 60/267,977
 ; PRIOR FILING DATE: 2001-02-09
 ; NUMBER OF SEQ ID NOS: 5
 ; SEQ ID NO 5
 ; LENGTH: 56
 ; TYPE: PRT
 ; ORGANISM: Artificial Sequence
 ; FEATURE:
 ; OTHER INFORMATION: Residues observed in IGF-1 structure.
 ; US-10-066-009A-5

Query Match 77.9%; Score 300; DB 13; Length 56;
 Best Local Similarity 90.3%; Pred. No. 8.5e-30;
 Matches 56; Conservative 0; Mismatches 0; Indels 6; Gaps 1;

Qy 3 ETLCGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLEMYCA 62
 Db 1 ETLCGAELVDALQFVCGDRGFYFNKPTGYGSS-----TGIVDECCFRSCLRLRLEMYCA 54
 Qy 63 PL 64
 Db 55 PL 56

RESULT 39
 ; US-09-205-658-138
 ; Sequence 138, Application US/09205658
 ; Patent No. US20010029617A1
 ; GENERAL INFORMATION:
 ; APPLICANT: Ruvkun, Gary
 ; APPLICANT: Ory, Scott
 ; TITLE OF INVENTION: THERAPEUTIC AND DIAGNOSTIC TOOLS FOR

```

; TITLE OF INVENTION: IMPAIRED GLUCOSE TOLERANCE CONDITIONS
; FILE REFERENCE: 00786/351004
; CURRENT APPLICATION NUMBER: US/09/205,658
; EARLIER FILING DATE: 1998-12-03
; EARLIER APPLICATION NUMBER: 08/857,076
; EARLIER FILING DATE: 1997-05-15
; EARLIER APPLICATION NUMBER: 08/888,534
; EARLIER FILING DATE: 1997-07-07
; EARLIER APPLICATION NUMBER: US98/10080
; EARLIER FILING DATE: 1998-05-15
; NUMBER OF SEQ ID NOS: 328
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 138
; LENGTH: 46
; TYPE: PRT
; ORGANISM: Bos taurus
; FEATURE:
; NAME/KEY: VARIANT
; LOCATION: (1)...(46)
; OTHER INFORMATION: Xaa = Any Amino Acid
US-09-205-658-138

```

```

Query Match 58.1%; Score 223.5; DB 9; Length 46;
Best Local Similarity 75.4%; Pred. No. 2.2e-20;
Matches 43; Conservative 0; Mismatches 3; Indels 11; Gaps 1;
Qy 5 LCGAELVDALQFVCGDRGFYFNKPTGSGSSRRAPQTGIVDECCFRSCDLRRLRLEMYC 61
Db 1 LCGAELVDALQFVCGDRGF-----XXXAPQTGIVDECCFRSCDLRRLRLEMYC 46

```

```

RESULT 40
US-09-205-658-139
; Sequence 139, Application US/09205658
; Patent No. US20010029617A1
; GENERAL INFORMATION:
; APPLICANT: ruvkun, gary
; TITLE OF INVENTION: IMPAIRED GLUCOSE TOLERANCE CONDITIONS
; FILE REFERENCE: 00786/351004
; CURRENT APPLICATION NUMBER: US/09/205,658
; EARLIER FILING DATE: 1998-12-03
; EARLIER APPLICATION NUMBER: 08/857,076
; EARLIER FILING DATE: 1997-05-15
; EARLIER APPLICATION NUMBER: 08/888,534
; EARLIER FILING DATE: 1997-07-07
; EARLIER APPLICATION NUMBER: US98/10080
; NUMBER OF SEQ ID NOS: 328
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 139
; LENGTH: 46
; TYPE: PRT
; ORGANISM: Canis
; FEATURE:
; NAME/KEY: VARIANT
; LOCATION: (1)...(46)
; OTHER INFORMATION: Xaa = Any Amino Acid
US-09-205-658-139

```

```

Query Match 58.1%; Score 223.5; DB 9; Length 46;
Best Local Similarity 75.4%; Pred. No. 2.2e-20;
Matches 43; Conservative 0; Mismatches 3; Indels 11; Gaps 1;
Qy 5 LCGAELVDALQFVCGDRGFYFNKPTGSGSSRRAPQTGIVDECCFRSCDLRRLRLEMYC 61
Db 1 LCGAELVDALQFVCGDRGF-----XXXAPQTGIVDECCFRSCDLRRLRLEMYC 46

```

```

Search completed: March 18, 2004, 06:21:22
Job time : 37.7883 secs

```

GenCore version 5.1.6
Copyright (c) 1993 - 2004 Compugen Ltd.

OM protein - protein search, using sw model

Run on: February 25, 2004, 06:19:08 ; Search time 37.8102 Seconds
(without alignments)
584.135 Million cell updates/sec

Title: US-10-066-009A-1
Perfect score: 385
Sequence: 1 GPEITCGAELVDALQFVCGD.....SCDLRRLMEYCAPLKPAKSA 70

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 1017041 seqs, 315518202 residues 1017041
Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0
Maximum DB seq length: 2000000000
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

- Database : SPTREMBL_25.*
- 1: sp archea.*
 - 2: sp bacteria.*
 - 3: sp fungi.*
 - 4: sp human.*
 - 5: sp invertebrate.*
 - 6: sp mammal.*
 - 7: sp mhc.*
 - 8: sp organelle.*
 - 9: sp phage.*
 - 10: sp plant.*
 - 11: sp rodent.*
 - 12: sp virus.*
 - 13: sp vertebrate.*
 - 14: sp unclassified.*
 - 15: sp rvirus.*
 - 16: sp bacteriap.*
 - 17: sp_archaeap.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Match	Length	DB	ID	Description
1	385	100.0	130	4	Q9NP10	Q9np10 homo sapien
2	385	100.0	133	6	Q9NIC1	Q9nic1 bos taurus
3	385	100.0	137	4	Q14620	Q14620 homo sapien
4	385	100.0	139	4	Q13429	Q13429 homo sapien
5	385	100.0	139	6	P79167	P79167 equus caball
6	368	95.6	127	11	P97899	P97899 rattus sp.
7	365	94.8	153	11	Q8C4U6	Q8c4u6 mus musculus
8	365	94.8	165	11	Q8CAR0	Q8car0 mus musculus
9	344	89.4	153	13	Q93380	Q93380 meleagris g
10	333.5	86.6	69	6	O02807	O02807 bubalus bub
11	326	84.7	161	13	Q9PWK2	Q9pwk2 carassius a
12	326	84.7	178	13	Q9IBI0	Q9ibi0 cyprinus ca
13	323	83.9	66	6	Q9N1S6	Q9n1s6 capreolus c
14	323	83.9	161	13	Q9Y1B2	Q9y1b2 carassius a
15	321	83.4	117	13	Q91914	Q91914 ctenopharyx
16	321	83.4	161	13	Q90VV9	Q90vv9 brachydanio

17	318	82.6	116	13	Q91161
18	318	82.6	117	13	Q91476
19	318	82.6	145	13	Q91475
20	318	82.6	149	13	Q91231
21	318	82.6	155	13	Q91162
22	318	82.6	161	13	Q98SR6
23	318	82.6	161	13	Q91230
24	318	82.6	161	13	Q800D5
25	318	82.6	188	13	F81268
26	318	82.6	188	13	Q91965
27	303	78.7	186	13	Q800Y5
28	302	78.4	185	13	Q93607
29	302	78.4	185	13	O57436
30	302	78.4	186	13	Q93527
31	302	78.4	186	13	Q7TIA7
32	301	78.2	104	13	Q7T107
33	301	78.2	108	13	Q800N0
34	301	78.2	108	13	Q800M9
35	301	78.2	108	13	Q800M8
36	301	78.2	108	13	Q800M7
37	301	78.2	182	13	Q73720
38	301	78.2	182	13	Q42289
39	301	78.2	182	13	F79824
40	295	76.6	186	13	Q9PSX5
41	293	76.1	184	13	Q42336
42	280.5	72.9	185	13	Q9Y157
43	278.5	72.3	126	13	Q91442
44	278	72.2	62	13	Q91AA0
45	275	71.4	57	6	Q28236

ALIGNMENTS

RESULT 1
Q9NP10 PRELIMINARY; PRT; 130 AA.
ID Q9NP10
AC Q9NP10;
DT 01-OCT-2000 (TREMBLrel. 15, Created)
DT 01-OCT-2000 (TREMBLrel. 15, Last sequence update)
DT 01-JUN-2003 (TREMBLrel. 24, Last annotation update)
DE IGF1 protein precursor.
GN IGF1.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=88065102; PubMed=3683205;
RA Rall L.B., Scott J., Bell G.I.;
RT "Human insulin-like growth factor I and II messenger RNA: isolation of complementary DNA and analysis of expression."
RL Meth. Enzymol. 146:239-248(1987).
CC -|- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
CC -|- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DR EMBL; M29644; AA452543.1; -
DR HSSP; F01343; 2GF1.
DR GO; GO:0005576; C:extracellular; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
DR GO; GO:0007582; P:physiological processes; IEA.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; insulin; 1.
DR PRINTS; PR00277; INSULIN.
DR SMART; SM00078; IIGF; 1.
DR PROSITE; PS00262; INSULIN; 1.
KW SIGNAL.
FT CHAIN 1 25 POTENTIAL.
FT CHAIN 26 95 POTENTIAL.
SQ SEQUENCE 130 AA; 14406 MW; 970FBAACFA0352D CRC64;
Query Match 100.0%; Score 385; DB 4; Length 130;
Best Local Similarity 100.0%; Pred. No. 1.2e-42;

Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 GPELTCGAEIVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRL EMY 60
 |||||
 Db 26 GPELTCGAEIVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRL EMY 85
 |||||

OY 61 CAPLKPAKSA 70
 |||||
 Db 86 CAPLKPAKSA 95
 |||||

RESULT 2
 Q9NIC1 PRELIMINARY; PRT; 133 AA.
 AC Q9NIC1
 DT 01-OCT-2000 (TrEMBLrel. 15, Created)
 DT 01-NOV-1996 (TrEMBLrel. 15, Last sequence update)
 DT 01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
 DE Insulin-like growth factor I (Fragment).
 GN IGF1.
 OS Bos taurus (Bovine).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidae;
 OC Bovidae; Bovinae; Bos.
 OX NCBI_TaxID=9913;
 RN [1]
 RP SEQUENCE FROM N.A.
 RA Lien S., Karlisen A., Klemetsdal G., Vage D.I., Olsaker I.,
 RA Klungland H., Asland M., Heringstad B., Ruane J., Gomez-Raya L.;
 RT "A primary screen of the bovine genome for quantitative trait loci
 RT affecting twinning rate";
 RL Submitted (DSC-1999) to the EMBL/GenBank/DBJ databases.
 CC -1- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
 CC -1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
 DR EMBL; AF210387; AAF72409.1; -.
 DR EMBL; AF210385; AAF72409.1; JOINED.
 DR EMBL; AF210386; AAF72409.1; JOINED.
 DR HSP; P01343; 2GFI.
 DR GO; GO:0005576; C:extracellular; IEA.
 DR GO; GO:0005179; F:hormone activity; IEA.
 DR GO; GO:0007582; P:physiological processes; IEA.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR PRINTS; PR00277; INSULIN.
 DR SMART; SMO0078; IIGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 FT CHAIN 1 32 POTENTIAL.
 FT SIGNAL 33 137 INSULIN-LIKE GROWTH FACTOR I.
 FT CHAIN 33 137 INSULIN-LIKE GROWTH FACTOR I.
 SQ SEQUENCE 133 AA; 14674 MW; A6991DBC875C103B CRC64;

Query Match 100.0%; Score 385; DB 6; Length 133;
 Best Local Similarity 100.0%; Pred. No. 1.2e-42;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 GPELTCGAEIVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRL EMY 60
 |||||
 Db 29 GPELTCGAEIVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRL EMY 86
 |||||

OY 61 CAPLKPAKSA 70
 |||||
 Db 89 CAPLKPAKSA 98
 |||||

RESULT 3
 Q14620 PRELIMINARY; PRT; 137 AA.
 AC Q14620
 DT 01-NOV-1996 (TrEMBLrel. 01, Created)
 DT 01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
 DT 01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
 DE Insulin-like growth factor I precursor.
 GN IGF1.
 OS Homo sapiens (Human).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.
 NCBI_TaxID=9606;
 [1]
 SEQUENCE FROM N.A.
 MEDLINE=9187000; PubMed=2082190;
 RA Tobin G., Yee D., Brunner N., Rotwein P.;
 RT "A novel human insulin-like growth factor I messenger RNA is expressed
 RT in normal and tumor cells.";
 RL Mol. Endocrinol. 4:1914-1920(1990).
 CC -1- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
 CC -1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
 DR EMBL; M37484; RAAS2789.1; -.
 DR FIR; A6552; A36552.
 DR HSP; P01343; 2GFI.
 DR GO; GO:0005576; C:extracellular; IEA.
 DR GO; GO:0005179; F:hormone activity; IEA.
 DR GO; GO:0007582; P:physiological processes; IEA.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR PRINTS; PR00277; INSULIN.
 DR SMART; SMO0078; IIGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 KW Signal.
 FT SIGNAL 1 32 POTENTIAL.
 FT CHAIN 33 137 INSULIN-LIKE GROWTH FACTOR I.
 FT CHAIN 33 137 INSULIN-LIKE GROWTH FACTOR I.
 SQ SEQUENCE 137 AA; 15177 MW; BFCC0D11E32AB75D CRC64;

Query Match 100.0%; Score 385; DB 4; Length 137;
 Best Local Similarity 100.0%; Pred. No. 1.3e-42;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 GPELTCGAEIVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRL EMY 60
 |||||
 Db 33 GPELTCGAEIVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRL EMY 92
 |||||

OY 61 CAPLKPAKSA 70
 |||||
 Db 93 CAPLKPAKSA 102
 |||||

RESULT 4
 Q13429 PRELIMINARY; PRT; 139 AA.
 AC Q13429
 ID Q13429
 DT 01-NOV-1996 (TrEMBLrel. 01, Created)
 DT 01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
 DT 01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
 DE Insulin-like growth factor-1 (Fragment).
 GN IGF-1.
 OS Homo sapiens (Human).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.
 OX NCBI_TaxID=9606;
 [1]
 SEQUENCE FROM N.A.
 RC TISSUE=Liver;
 RA MEDLINE=95237119; PubMed=7720641;
 RA Chew S.L., Lavender P., Clark A.J., Ross R.J.;
 RT "An alternatively spliced human insulin-like growth factor-I
 RT transcript with hepatic tissue expression that diverts away from the
 RT mitogenic IBE1 peptide";
 RL Endocrinology 136:1939-1944(1995).
 CC -1- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
 CC -1- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
 DR EMBL; U40870; AAA96152.1; -.
 DR HSP; P01343; 2GFI.
 DR GO; GO:0005576; C:extracellular; IEA.
 DR GO; GO:0005179; F:hormone activity; IEA.
 DR GO; GO:0007582; P:physiological processes; IEA.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR PRINTS; PR00277; INSULIN.
 DR SMART; SMO0078; IIGF; 1.

DR PROSITE; PS00262; INSULIN; 1.
 FT NON TER 1
 SQ SEQUENCE 139 AA; 15611 MW; A62271872CA29DE4 CRC64;
 Query Match 100.0%; Score 385; DB 4; Length 139;
 Best Local Similarity 100.0%; Pred. No. 1.3e-42;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPEILCGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLREMY 60
 DB 30 GPEILCGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLREMY 89

QY 61 CAPLKPAKSA 70
 DB 90 CAPLKPAKSA 99

RESULT 5
 P79167 PRELIMINARY; PRT; 139 AA.
 AC P79167;
 DT 01-MAY-1997 (TREMBlrel. 03, Created)
 DT 01-OCT-2000 (TREMBlrel. 15, Last sequence update)
 DT 01-JUN-2003 (TREMBlrel. 24, Last annotation update)
 DE Insulin-like growth factor IB precursor (IGF-IB) (Somatomedin C) (Fragments).
 GN IGF1.
 OS Equus caballus (Horse).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Perissodactyla; Equidae; Equus.
 OX NCBI_TaxID=9796;
 RN [1]
 RP SEQUENCE OF 1-122 FROM N.A.
 RC TISSUE=Liver;
 RX MEDLINE=97013467; PubMed=8660303;
 RA Otto K., Rozell B., Gessbo A., Engstrom W.;
 RT "Cloning and sequencing of an equine insulin-like growth factor I cDNA and its expression in fetal and adult tissues.";
 RL Gen. Comp. Endocrinol. 102:11-15(1996).
 RN [2]
 RP SEQUENCE OF 123-139 FROM N.A.
 RA Nixon A.J., Toland B.D., Sandell L.J.;
 RL Submitted (JAN-1997) to the EMBL/GenBank/DBJ databases.
 CC -!- FUNCTION: THE INSULIN-LIKE GROWTH FACTORS, ISOLATED FROM PLASMA, ARE STRUCTURALLY AND FUNCTIONALLY RELATED TO INSULIN BUT HAVE A MUCH HIGHER GROWTH-PROMOTING ACTIVITY.
 CC -!- SUBCELLULAR LOCATION: SECRETED.
 CC -!- ALTERNATIVE PRODUCTS:
 CC Event=Alternative splicing; Named isoforms=2;
 CC Name=IGF-IB;
 CC IsoId=P79167-1; Sequence=Displayed;
 CC Name=IGF-IA;
 CC IsoId=P51458-1; Sequence=External;
 CC -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.

DR EMBL; U28070; AA468952.1; -;
 DR HSSP; P01343; 2GF1.
 DR GO; GO:0005576; C:extracellular; IEA.
 DR GO; GO:0005083; F:growth factor activity; IEA.
 DR GO; GO:0005175; F:hormone activity; IEA.
 DR GO; GO:0007582; F:physiological processes; IEA.
 DR InterPro; IPR004625; Inb/IGF/relax.
 DR PRINTS; PRO0277; INSULINB.
 DR SMART; SM00078; IIGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 KW Insulin family; growth factor; Signal; Alternative splicing.
 FT SIGNAL 1
 FT PROPEP ? 48 BY SIMILARITY.
 FT CHAIN 49 118 INSULIN-LIKE GROWTH FACTOR IB.
 FT DOMAIN 49 77 B.
 FT DOMAIN 78 89 C.
 FT DOMAIN 90 110 A.
 FT DOMAIN 111 118 D.

FT PROPEP 119 >139 E PEPTIDE.
 FT NON CONS 122 123
 FT DISULFID 54 96 BY SIMILARITY.
 FT DISULFID 66 109 BY SIMILARITY.
 FT DISULFID 95 100 BY SIMILARITY.
 FT NON_TER 139 139
 SQ SEQUENCE 139 AA; 15612 MW; CDCOE8F19C261A2C CRC64;
 Query Match 100.0%; Score 385; DB 6; Length 139;
 Best Local Similarity 100.0%; Pred. No. 1.3e-42;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPEILCGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLREMY 60
 DB 49 GPEILCGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLREMY 108

QY 61 CAPLKPAKSA 70
 DB 109 CAPLKPAKSA 118

RESULT 6
 P97899 PRELIMINARY; PRT; 127 AA.
 AC P97899;
 DT 01-MAY-1997 (TREMBlrel. 03, Created)
 DT 01-MAY-1997 (TREMBlrel. 03, Last sequence update)
 DT 01-JUN-2003 (TREMBlrel. 24, Last annotation update)
 DE Insulin-like growth factor I.
 OS Rattus sp.
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
 OX NCBI_TaxID=10118;
 RN [1]
 RP PARTIAL SEQUENCE FROM N.A.
 RX MEDLINE=8722423; PubMed=3034909;
 RA Shimatsu A., Rotwein P.;
 RT "Mosaic evolution of the insulin-like growth factors.";
 RL J. Biol. Chem. 262:7894-7900(1987).
 RN [2]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=91103966; PubMed=1368571;
 RA Kato H., Okoshi A., Miura Y., Noguchi T.;
 RT "A new cDNA clone relating to larger molecular species of rat insulin-like growth factor-I mRNA.";
 RL Agric. Biol. Chem. 54:1599-1601(1990).
 CC -!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
 CC -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
 DR EMBL; D00698; BA00604.1; -;
 DR HSSP; P01343; 2GF1.
 DR GO; GO:0005576; C:extracellular; IEA.
 DR GO; GO:0005179; F:hormone activity; IEA.
 DR GO; GO:0007582; F:physiological processes; IEA.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; insulin; 1.
 DR PRINTS; PRO0277; INSULINB.
 DR SMART; SM00078; IIGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 FT CHAIN 23 92 POTENTIAL.
 FT SEQUENCE 127 AA; 14106 MW; 104E126BCFCA5CB7 CRC64;

Query Match 95.6%; Score 368; DB 11; Length 127;
 Best Local Similarity 95.7%; Pred. No. 2e-40;
 Matches 67; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

QY 1 GPEILCGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLREMY 60
 DB 23 GPEILCGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLREMY 82

QY 61 CAPLKPAKSA 70
 DB 83 CAPLKPAKSA 92


```

Qy 61 CAPLKPaks 69
Db 122 CAPVKPGK 130

RESULT 13
Q9N1S6 PRELIMINARY; PRT; 66 AA.
AC Q9N1S6;
DT 01-OCT-2000 (TReMBLrel. 15, Created)
DT 01-OCT-2000 (TReMBLrel. 15, Last sequence update)
DT 01-JUN-2003 (TReMBLrel. 24, Last annotation update)
DE Insulin-like growth factor I (Fragment).
GN IGF-I.
OS Capreolus capreolus (roe deer).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Cervioidea;
OC Cervidae; Odocoileinae; Capreolus.
OX NCBI_TaxID=9858;
RN [1];
RP SEQUENCE FROM N.A.
RC TISSUE=Testis;
EX MEDLINE=20532861; PubMed=11078967;
EA Wagener A., Blotner S., Goritz F., Fickel J.;
RT "Detection of growth factors in the testis of roe deer (Capreolus
RT capreolus).";
RL Anim. Reprod. Sci. 64:65-75(2000).
CC -!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
CC -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DR EMBL; AF152588; AAF73227.1; -.
DR HSSP; P01343; 2GF1.
DR GO; GO:0005576; C:extracellular; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
DR GO; GO:0007582; P:physiological processes; IEA.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.
DR PRINTS; PR00276; INSULIN.
DR SMART; SM00078; IIGF; 1.
DR PROSITE; PS00262; INSULIN; 1.
FT NON TER 1
FT NON TER 66
SQ SEQUENCE 66 AA; 7422 MW; 4B5ACFBADF73E1 CRC64;

Query Match 83.9%; Score 323; DB 6; Length 66;
Best Local Similarity 98.3%; Pred. No. 8.1e-35;
Matches 58; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Qy 12 DALQVCGDRGFYFNKFTGYGSSRRAPQGTIVDECCFRSCDLRRLLEMYCAPLKPAKA 70
Db 1 DALQVCGDRGFYFNKFTGYGSSRRAPQGTIVDECCFRSCDLRRLLEMYCAPLKPAKA 59

RESULT 14
Q9YI82 PRELIMINARY; PRT; 161 AA.
AC Q9YI82;
DT 01-MAY-1999 (TReMBLrel. 10, Created)
DT 01-MAY-1999 (TReMBLrel. 10, Last sequence update)
DT 01-JUN-2003 (TReMBLrel. 24, Last annotation update)
DE Insulin-like growth factor-I.
OS Carassius auratus (Goldfish).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Cypriniformes;
OC Cyprinidae; Carassius.
OX NCBI_TaxID=7957;
RN [1];
RP SEQUENCE FROM N.A.
RC TISSUE=Liver;
EA Kermouni A., Mahmoud S.S., Wang S., Moloney M., Habibi H.R.;
RT "Cloning of a full-length insulin-like growth factor-I complementary
RT DNA in the goldfish liver and ovary and development of a quantitative
RT PCR method for its measurement.";

```

```

RL Submitted (APR-1997) to the EMBL/GenBank/DBJ databases.
CC -!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
CC -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DR EMBL; AF001005; AAC3443.1; -.
DR HSSP; P01343; 2GF1.
DR GO; GO:0005576; C:extracellular; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
DR GO; GO:0007582; P:physiological processes; IEA.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.
DR PRINTS; PR00277; INSULIN.
DR SMART; SM00078; IIGF; 1.
DR PROSITE; PS00262; INSULIN; 1.
SQ SEQUENCE 161 AA; 17976 MW; 86B60EADAA85C9D CRC64;

Query Match 83.9%; Score 323; DB 13; Length 161;
Best Local Similarity 81.2%; Pred. No. 2.1e-34;
Matches 56; Conservative 7; Mismatches 6; Indels 0; Gaps 0;

Qy 1 GPETLGGAEIVDALQVCGDRGFYFNKFTGYGSSRRAPQGTIVDECCFRSCDLRRLLEMY 60
Db 45 GPETLGGAEIVDTLQVCGDRGFYFNKFTGYGSSRRAPQGTIVDECCFRSCDLRRLLEMY 104

Qy 61 CAPLKPaks 69
Db 105 CAPVKPGK 113

RESULT 15
Q9I914 PRELIMINARY; PRT; 117 AA.
AC Q9I914;
DT 01-OCT-2000 (TReMBLrel. 15, Created)
DT 01-OCT-2000 (TReMBLrel. 15, Last sequence update)
DT 01-JUN-2003 (TReMBLrel. 24, Last annotation update)
DE Insulin-like growth factor-I (Fragment).
OS Ctenopharyngodon idella (Gross carp).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Cypriniformes;
OC Cyprinidae; Ctenopharyngodon.
OX NCBI_TaxID=7959;
RN [1];
RP SEQUENCE FROM N.A.
RC TISSUE=Liver;
EA Bai J.J., Ye X., Li Y.H., Li X.H., Jian Q., Lou J.R.;
RT "Isolation and characterization of grass carp (Ctenopharyngodon
RT idellus) insulin-like growth factor gene.";
RL Submitted (MAR-2000) to the EMBL/GenBank/DBJ databases.
CC -!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
CC -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DR EMBL; AF247658; AAF65819.1; -.
DR HSSP; P01343; 2GF1.
DR GO; GO:0005576; C:extracellular; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
DR GO; GO:0007582; P:physiological processes; IEA.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.
DR PRINTS; PR00277; INSULIN.
DR SMART; SM00078; IIGF; 1.
DR PROSITE; PS00262; INSULIN; 1.
FT NON TER 1
FT NON TER 117
SQ SEQUENCE 117 AA; 13050 MW; CA00DAFF7913A34A CRC64;

Query Match 83.4%; Score 321; DB 13; Length 117;
Best Local Similarity 82.6%; Pred. No. 2.8e-34;
Matches 57; Conservative 5; Mismatches 7; Indels 0; Gaps 0;

Qy 1 GPETLGGAEIVDALQVCGDRGFYFNKFTGYGSSRRAPQGTIVDECCFRSCDLRRLLEMY 60
Db 1 GPETLGGAEIVDTLQVCGDRGFYFNKFTGYGSSRRAPQGTIVDECCFRSCDLRRLLEMY 60

Qy 61 CAPLKPaks 69

```

Db 61 CAPVKTGKS 69

RESULT 16

Q90VV9 PRELIMINARY; PRT; 161 AA.

AC Q90VV9; (Created)

DT 01-DEC-2001 (TREMBlrel. 19, Last sequence update)

DT 01-DEC-2001 (TREMBlrel. 19, Last sequence update)

DE (Insulin-like growth factor 1 precursor (insulin-like growth factor 1b) IGF1 OR IGF-1 OR IGF-1L.

GN Brachydanio rerio (Zebrafish) (Danio rerio).

OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

OC Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Cypriniformes;

OC Cyprinidae; Danio.

OX NCBI_TaxID=7955;

RN [1]

RP SEQUENCE FROM N.A.

RA Chen M.H.C., Lin G., Gong H., Weng C., Chang C., Wu J.;

RT "The characterization of prepro-insulin-like growth factor-1 Ea-2 expression and Insulin-like growth factor-1 genes (devoid of bp) in the zebrafish (Danio rerio).";

RL Submitted (MAY-2000) to the EMBL/GenBank/DBJ databases.

RN [2]

RP SEQUENCE FROM N.A.

RX MEDLINE=21261964; PubMed=11368902;

RA Chen M.H.C., Lin G.H., Gong H.Y., Weng C.F., Chang C.Y., Wu J.L.;

RT "The characterization of prepro-insulin-like growth factor-1 Ea-2 expression and insulin-like growth factor-1 genes (devoid of bp) in the zebrafish (Danio rerio).";

RL Gene 268:67-75(2001).

RN [3]

RP SEQUENCE FROM N.A.

RA Chen M.H.C., Lin G.H., Gong H.Y., Weng C.-F., Chang C.-Y., Wu J.-L.;

RT "The characterization of prepro-insulin-like growth factor 1 Ea-2 expression and insulin-like growth factor 1 genes (devoid of bp) in the zebrafish (Danio rerio).";

RL Submitted (OCT-2000) to the EMBL/GenBank/DBJ databases.

CC -!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).

CC -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.

DR EMBL; AF268051; AAKS8584.1; -

DR EMBL; AF270704; AAKS8609.1; -

DR EMBL; AF270703; AAKS8609.1; JOINED.

DR EMBL; AF314545; AAL26846.1; -

DR HSSP; F01308; ILNP.

DR ZFIN; ZDB-GENE-010607-2; igf1.

DR GO; GO:0005576; C:extracellular; IEA.

DR GO; GO:0005179; F:hormone activity; IEA.

DR GO; GO:0007582; P:physiological processes; IEA.

DR InterPro; IPR004825; Ins/IGF/relax.

DR Pfam; PF00049; Insulin; 1.

DR SMART; SM00078; ILGF; 1.

DR PROSITE; PS00262; INSULIN; 1.

KW Signal.

FT SIGNAL.

FT SIGNAL.

FT CHAIN 19 >88

FT NON_TER 116 116

SQ SEQUENCE 161 AA; 17925 MW; C97DE0E1FF24E0CC CRC64;

Query Match 83.4%; Score 321; DB 13; Length 161;

Best Local Similarity 82.6%; Pred. No. 3.9e-34;

Matches 57; Conservative 5; Mismatches 7; Indels 0; Gaps 0;

QY 1 GPETLCGAEIYDALQVCGDRGFYFKPTGYSRRAPQGIYDECCFRSCDLRLEMY 60

Db 45 GPETLCGAEIYDVLQVCGDRGFYFKPTGYSRRSHNRGIVDECCFQSCDLRLEMY 104

QY 61 CAPLKPFAKS 69

Db 105 CAPVKTGKS 113

RESULT 17

Q91161 PRELIMINARY; PRT; 116 AA.

AC Q91161;

DT 01-NOV-1996 (TREMBlrel. 01, Created)

DT 01-NOV-1996 (TREMBlrel. 01, Last sequence update)

DT 01-JUN-2003 (TREMBlrel. 24, Last annotation update)

DE Insulin-like growth factor I precursor (Fragment).

OS Oncorhynchus kisutch (Coho salmon).

OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

OC Actinopterygii; Neopterygii; Teleostei; Euteleostei;

OC Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.

OX NCBI_TaxID=8019;

RN [1]

RP SEQUENCE FROM N.A.

RC TISSUE=Liver;

RX MEDLINE=90190659; PubMed=2628735;

RA Cao Q.P., Duguay S.J., Plisetskaya E., Steiner D.F., Chan S.J.;

RT "Nucleotide sequence and growth hormone regulated expression of salmon insulin-like growth factor I mRNA.";

RL Mol. Endocrinol. 3:2005-2010(1989).

RN [2]

RP SEQUENCE FROM N.A.

RC TISSUE=Liver;

RX MEDLINE=93024477; PubMed=1406698;

RA Duguay S.J., Park L.K., Samadpour M., Dickhoff W.W.;

RT "Nucleotide sequence and tissue distribution of three insulin-like growth factor I prohormones in salmon.";

RL Mol. Endocrinol. 6:1202-1210(1992).

CC -!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).

CC -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.

DR EMBL; M81911; AAB59947.1; -

DR HSSP; F01343; 2GF1.

DR GO; GO:0005576; C:extracellular; IEA.

DR GO; GO:0005179; F:hormone activity; IEA.

DR GO; GO:0007582; P:physiological processes; IEA.

DR InterPro; IPR004825; Ins/IGF/relax.

DR Pfam; PF00049; Insulin; 1.

DR PRINTS; PR00277; INSULIN.

DR SMART; SM00078; ILGF; 1.

DR PROSITE; PS00262; INSULIN; 1.

KW Signal.

FT NON_TER 1 1

FT SIGNAL <1 18

FT SIGNAL 19 >88

FT CHAIN 116 116

FT NON_TER 116 116

SQ SEQUENCE 116 AA; 12697 MW; C5F378915179D89D CRC64;

Query Match 82.6%; Score 318; DB 13; Length 116;

Best Local Similarity 80.0%; Pred. No. 6.8e-34;

Matches 56; Conservative 7; Mismatches 7; Indels 0; Gaps 0;

QY 1 GPETLCGAEIYDALQVCGDRGFYFKPTGYSRRAPQGIYDECCFRSCDLRLEMY 60

Db 19 GPETLCGAEIYDVLQVCGDRGFYFKPTGYSRRSHNRGIVDECCFQSCDLRLEMY 78

QY 61 CAPLKPFAKS 70

Db 79 CAPVKSGRGA 88

RESULT 18

Q91476 PRELIMINARY; PRT; 117 AA.

AC Q91476

DT 01-NOV-1996 (TREMBlrel. 01, Created)

DT 01-NOV-1996 (TREMBlrel. 01, Last sequence update)

DT 01-JUN-2003 (TREMBlrel. 24, Last annotation update)

DE Insulin-like growth factor I precursor (Fragment).

OS Salmo salar (Atlantic salmon).

OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

OC Actinopterygii; Neopterygii; Teleostei; Euteleostei;

OC Protacanthopterygii; Salmoniformes; Salmonidae; Salmo.

OK NCBI_TaxID=8030;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Liver;
 RX MEDLINE=93024477; PubMed=1406698;
 RA Duguay S.J., Park L.K., Samaopour M., Dickhoff W.W.;
 RT "Nucleotide sequence and tissue distribution of three insulin-like
 RL growth factor I prohormones in salmon."
 RL Mol. Endocrinol. 6:1202-1210(1992).
 CC -|- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
 DR EMBL; M81904; AAA18212.1; -
 DR HSSP; P01343; 2GFI.
 DR GO; GO:0005576; C:extracellular; IEA.
 DR GO; GO:0005179; F:hormone activity; IEA.
 DR GO; GO:0007582; P:physiological processes; IEA.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR PRINTS; PR00277; INSULIN.
 DR SMART; SM00078; ILGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 KW Signal.
 FT NON TER 1 1
 FT SIGNAL <1 18 POTENTIAL.
 FT CHAIN 19 88 INSULIN-LIKE GROWTH FACTOR I.
 SQ SEQUENCE 117 AA; 12867 MW; A97666EE2F526EAC CRC64;
 Query Match 82.6%; Score 318; DB 13; Length 117;
 Best Local Similarity 80.0%; Pred. No. 6.9e-34; Indels 0; Gaps 0;
 Matches 56; Conservative 7; Mismatches 7; Indels 0; Gaps 0;
 OY 1 GPETLCAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRCDLRLLEMY 60
 DB 19 GPETLCAELVDTLQFVCGERGFYFKPTGYGSSRRHRNGRIVDECCFQSCELRLLEMY 78
 OY 61 CAPLKPAXSA 70
 DB 79 CAPVKSCKAA 88
 RESULT 19
 Q91475 PRELIMINARY; PRT; 145 AA.
 ID Q91475;
 AC Q91475;
 DT 01-NOV-1996 (TrEMBLrel. 01, Created)
 DT 01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
 DT 01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
 DE Insulin-like growth factor I precursor (Fragment).
 OS Salmo salar (Atlantic salmon).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Actinopterygii; Neopterygii; Teleostei; Euteleostei;
 OC Protacanthopterygii; Salmoniformes; Salmonidae; Salmo.
 OX NCBI_TaxID=8030;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Liver;
 RX MEDLINE=93024477; PubMed=1406698;
 RA Duguay S.J., Park L.K., Samaopour M., Dickhoff W.W.;
 RT "Nucleotide sequence and tissue distribution of three insulin-like
 RL growth factor I prohormones in salmon."
 RL Mol. Endocrinol. 6:1202-1210(1992).
 CC -|- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
 DR EMBL; M81904; AAA18211.1; -
 DR HSSP; P01343; 2GFI.
 DR GO; GO:0005576; C:extracellular; IEA.
 DR GO; GO:0005179; F:hormone activity; IEA.
 DR GO; GO:0007582; P:physiological processes; IEA.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR PRINTS; PR00277; INSULIN.
 DR SMART; SM00078; ILGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 KW Signal.
 FT NON TER 1 1
 FT SIGNAL <1 18 POTENTIAL.
 FT CHAIN 19 88 INSULIN-LIKE GROWTH FACTOR I.
 SQ SEQUENCE 117 AA; 12867 MW; A97666EE2F526EAC CRC64;
 Query Match 82.6%; Score 318; DB 13; Length 117;
 Best Local Similarity 80.0%; Pred. No. 6.9e-34; Indels 0; Gaps 0;
 Matches 56; Conservative 7; Mismatches 7; Indels 0; Gaps 0;
 OY 1 GPETLCAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRCDLRLLEMY 60
 DB 19 GPETLCAELVDTLQFVCGERGFYFKPTGYGSSRRHRNGRIVDECCFQSCELRLLEMY 78
 OY 61 CAPLKPAXSA 70
 DB 79 CAPVKSCKAA 88

Signal.
 FT NON TER 1 1
 FT SIGNAL <1 18 POTENTIAL.
 FT CHAIN 19 >88 INSULIN-LIKE GROWTH FACTOR I.
 FT NON TER 145 145
 SQ SEQUENCE 145 AA; 15885 MW; 3D94EDFA77268FCA CRC64;
 Query Match 82.6%; Score 318; DB 13; Length 145;
 Best Local Similarity 80.0%; Pred. No. 8.7e-34; Indels 0; Gaps 0;
 Matches 56; Conservative 7; Mismatches 7; Indels 0; Gaps 0;
 OY 1 GPETLCAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRCDLRLLEMY 60
 DB 19 GPETLCAELVDTLQFVCGERGFYFKPTGYGSSRRHRNGRIVDECCFQSCELRLLEMY 78
 OY 61 CAPLKPAXSA 70
 DB 79 CAPVKSCKAA 88
 RESULT 20
 Q91231 PRELIMINARY; PRT; 149 AA.
 ID Q91231;
 AC Q91231;
 DT 01-NOV-1996 (TrEMBLrel. 01, Created)
 DT 01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
 DT 01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
 DE Insulin-like growth factor-I.
 GN IGF-I.
 OS Oncorhynchus tshawytscha (Chinook salmon) (King salmon).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Actinopterygii; Neopterygii; Teleostei; Euteleostei;
 OC Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
 OX NCBI_TaxID=74940;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN=Big Qualicum River; TISSUE=Liver;
 RX MEDLINE=93247592; PubMed=7683374;
 RA Wallis A.E., Devlin R.H.;
 RT "Duplicate insulin-like growth factor-I genes in salmon display
 RL alternative splicing pathways."
 RL Mol. Endocrinol. 7:409-422(1993).
 RN [2]
 RP SEQUENCE FROM N.A.
 RC STRAIN=Big Qualicum River; TISSUE=Liver;
 RA Devlin R.H.;
 RL Submitted (OCT-1994) to the EMBL/GenBank/DBJ databases.
 CC -|- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
 CC -|- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
 DR EMBL; U15962; AAA67269.1; -
 DR FPIR; D54270; D54270.
 DR HSSP; P01343; 2GFI.
 DR GO; GO:0005576; C:extracellular; IEA.
 DR GO; GO:0005179; F:hormone activity; IEA.
 DR GO; GO:0007582; P:physiological processes; IEA.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR PRINTS; PR00277; INSULIN.
 DR SMART; SM00078; ILGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 SQ SEQUENCE 149 AA; 16507 MW; 9AC8F072762D2AA0 CRC64;
 Query Match 82.6%; Score 318; DB 13; Length 149;
 Best Local Similarity 80.0%; Pred. No. 9e-34; Indels 0; Gaps 0;
 Matches 56; Conservative 7; Mismatches 7; Indels 0; Gaps 0;
 OY 1 GPETLCAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRCDLRLLEMY 60
 DB 45 GPETLCAELVDTLQFVCGERGFYFKPTGYGSSRRHRNGRIVDECCFQSCELRLLEMY 104
 OY 61 CAPLKPAXSA 70
 DB 105 CAPVKSCKAA 114

RESULT 21
Q91162 PRELIMINARY; PRT; 155 AA.
AC Q91162;
DT 01-NOV-1996 (TREMBlrel. 01, Created)
DT 01-NOV-1996 (TREMBlrel. 01, Last sequence update)
DT 01-JUN-2003 (TREMBlrel. 24, Last annotation update)
DE Insulin-like growth factor I precursor (Fragment).
DE Oncorhynchus kisutch (Coho salmon).
OS Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Actinopterygii; Neopterygii; Teleostei; Euteleostei;
OC Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
OX NCBI_TaxID=8019;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=Liver;
RX MEDLINE=90190659; PubMed=2628735;
RA Cao Q.P., Duguay S.J., Plisetskaya E., Steiner D.F., Chan S.J.;
"nucleotide sequence and growth hormone regulated expression of salmon
RT insulin-like growth factor I mRNA."
RL Mol. Endocrinol. 3:2005-2010(1989).
RN [2]
RP SEQUENCE FROM N.A.
RC TISSUE=Liver;
RX MEDLINE=93024477; PubMed=1406698;
RA Duguay S.J., Park L.K., Samadpour M., Dickhoff W.W.;
"nucleotide sequence and tissue distribution of three insulin-like
RT growth factor I prohormones in salmon."
RL Mol. Endocrinol. 6:1202-1210(1992).
CC -!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
CC -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DR EMBL; M81913; AAA49413.1; -.
DR FIR; C44012; C44012.
DR HSSP; P01343; 2GFI.
DR GO; GO:0005576; C:extracellular; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
DR GO; GO:0007582; P:physiological processes; IEA.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.
DR PRINTS; PR00277; INSULINB.
DR SMART; SM00078; IIGF; 1.
DR PROSITE; PS00262; INSULIN; 1.
DR SIGNAL
DR NON_TER 1 1
FT SIGNAL <1 18 POTENTIAL.
FT CHAIN 19 >88 INSULIN-LIKE GROWTH FACTOR I.
FT CONFLICT 73 73 R -> X (IN REF. 1).
FT NON_TER 155 155
FT SEQUENCE 155 AA; 16968 MW; 022FD3CA39CA3160 CRC64;
Query Match 82.6%; Score 318; DB 13; Length 155;
Best Local Similarity 80.0%; Pred. No. 9.4e-34;
Matches 56; Conservative 7; Mismatches 7; Indels 0; Gaps 0;
QY 1 GPETLCGAEVLVALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLEY 60
19 GPETLCGAEVLDTLQFVCGERGFYFKPTGYGSSRRHNRGIVDECCFSCLELRLEY 78
QY 61 CAPLKPASKA 70
. |||:| |:
. |||:| |:
DB 79 CAPVSKGKAA 88
PRELIMINARY; PRT; 161 AA.
RESULT 22
Q98SR6
AC Q98SR6;
DT 01-JUN-2001 (TREMBlrel. 17, Created)
DT 01-JUN-2001 (TREMBlrel. 17, Last sequence update)
DT 01-JUN-2003 (TREMBlrel. 24, Last annotation update)
DE Insulin-like growth factor I.
OS Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Actinopterygii; Neopterygii; Teleostei; Euteleostei;
OC Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
OX NCBI_TaxID=74940;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=Big Qualicum River; TISSUE=Liver;
RX MEDLINE=93247592; PubMed=7683374;
RA Wallis A.E., Devlin R.H.;
RT "Duplicate insulin-like growth factor-I genes in salmon display
RT alternative splicing pathways."
RL Mol. Endocrinol. 7:409-422(1993).
RN [2]
RP SEQUENCE FROM N.A.
RC STRAIN=Big Qualicum River; TISSUE=Liver;
RA Devlin R.H.;
RL Submitted (OCT-1994) to the EMBL/GenBank/DBJ databases.
CC -!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
CC -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DR EMBL; U15961; AAA67267.1; -.
DR FIR; C54270; C54270.
DR HSSP; P01343; 2GFI.
DR GO; GO:0005576; C:extracellular; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.

OS Megalobrama amblycephala.
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Actinopterygii; Neopterygii; Teleostei; Osteichthyes; Cypriniformes;
OC Cyprinidae; Megalobrama.
OX NCBI_TaxID=75352;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=Liver;
RA Bai J., Lao H., Ye X.;
RT "Molecular cloning and sequence analysis of insulin-like growth factor
RT I cDNA from bluntsnout bream (Megalobrama amblycephala).";
RL Submitted (DEC-2000) to the EMBL/GenBank/DBJ databases.
CC -!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
CC -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DR EMBL; AF332865; AAJ16727.1; -.
DR HSSP; P01343; 2GFI.
DR GO; GO:0005576; C:extracellular; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
DR GO; GO:0007582; P:physiological processes; IEA.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.
DR PRINTS; PR00277; INSULINB.
DR SMART; SM00078; IIGF; 1.
DR PROSITE; PS00262; INSULIN; 1.
DR SIGNAL
DR NON_TER 1 1
FT SIGNAL <1 18 POTENTIAL.
FT CHAIN 19 >88 INSULIN-LIKE GROWTH FACTOR I.
FT CONFLICT 73 73 R -> X (IN REF. 1).
FT NON_TER 155 155
FT SEQUENCE 155 AA; 16968 MW; 022FD3CA39CA3160 CRC64;
Query Match 82.6%; Score 318; DB 13; Length 161;
Best Local Similarity 81.2%; Pred. No. 9.7e-34;
Matches 56; Conservative 6; Mismatches 7; Indels 0; Gaps 0;
QY 1 GPETLCGAEVLVALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLEY 60
45 GPETLCGAEVLDTLQFVCGERGFYFKPTGYGSSRRHNRGIVDECCFSCLELRLEY 104
DB 61 CAPLKPASKA 69
. |||:| |:
. |||:| |:
DB 105 CAPVKTGKT 113
PRELIMINARY; PRT; 161 AA.
RESULT 23
Q91230
ID Q91230 PRELIMINARY; PRT; 161 AA.
AC Q91230;
DT 01-NOV-1996 (TREMBlrel. 01, Created)
DT 01-NOV-1996 (TREMBlrel. 01, Last sequence update)
DT 01-JUN-2003 (TREMBlrel. 24, Last annotation update)
DE Insulin-like growth factor-I.
GN
OS Oncorhynchus tshawytscha (Chinook salmon) (King salmon).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Actinopterygii; Neopterygii; Teleostei; Euteleostei;
OC Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
OX NCBI_TaxID=74940;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=Big Qualicum River; TISSUE=Liver;
RX MEDLINE=93247592; PubMed=7683374;
RA Wallis A.E., Devlin R.H.;
RT "Duplicate insulin-like growth factor-I genes in salmon display
RT alternative splicing pathways."
RL Mol. Endocrinol. 7:409-422(1993).
RN [2]
RP SEQUENCE FROM N.A.
RC STRAIN=Big Qualicum River; TISSUE=Liver;
RA Devlin R.H.;
RL Submitted (OCT-1994) to the EMBL/GenBank/DBJ databases.
CC -!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
CC -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DR EMBL; U15961; AAA67267.1; -.
DR FIR; C54270; C54270.
DR HSSP; P01343; 2GFI.
DR GO; GO:0005576; C:extracellular; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.

Db 103 CAPAKTSKAA 112

RESULT 29
O57436 PRELIMINARY; PRT; 185 AA.

ID O57436
AC O57436
DT 01-JUN-1998 (TrEMBLrel. 06, Created)
DT 01-JUN-1998 (TrEMBLrel. 06, Last sequence update)
DT 01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DE Insulin-like growth factor I.
GN IGF-1
OS Paralicthys olivaceus (Flounder).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
OC Acanthomorpha; Acanthopterygii; Percomorpha; Pleuronectiformes;
OC Pleuronectoidei; Paralicthyidae; Paralicthys.
OX NCBI_TaxID=8255;
RN [1]
RP SEQUENCE FROM N.A.
RA Kim S.-H., Kim K.-S., Nam T.-J., Lee Y.-C.;
RT "Molecular cloning and expression of insulin-like growth factor I cDNA
from flounder liver."
RL Submitted (AUG-1997) to the EMBL/GenBank/DBJ databases.
CC -!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
CC -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DR EMBL; AF016922; AAB94052.1; --
DR HSSP; P01343; 2GFI.
DR GO; GO:000576; C:extracellular; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
DR GO; GO:0007582; P:physiological processes; IEA.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.
DR PRINTS; PR00277; INSULIN.
DR SMART; SM00078; IIGF; 1.
DR PROSITE; PS00262; INSULIN; 1.
DR SEQUENCE 185 AA; 20414 MW; 8A898369DF567BB3 CRC64;

Query Match 78.4%; Score 302; DB 13; Length 185;
Best Local Similarity 77.1%; Pred. No. 1.4e-31;
Matches 54; Conservative 9; Mismatches 5; Indels 2; Gaps 1;

Oy 1 GPETLCAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60
|||||
Db 45 GPETLCAELVDLTQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 102
|||||

Oy 61 CAPLKPAKSA 70
103 CAPAKTSKAA 112

RESULT 30
O93527 PRELIMINARY; PRT; 186 AA.

ID O93527
AC O93527
DT 01-NOV-1998 (TrEMBLrel. 08, Created)
DT 01-NOV-1998 (TrEMBLrel. 08, Last sequence update)
DT 01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DE Insulin-like growth factor I.
GN Paralicthys olivaceus (Flounder).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
OC Acanthomorpha; Acanthopterygii; Percomorpha; Pleuronectiformes;
OC Pleuronectoidei; Paralicthyidae; Paralicthys.
OX NCBI_TaxID=8255;
RN [1]
RP SEQUENCE FROM N.A.
RA Tanaka M.;
RT Submitted (APR-1998) to the EMBL/GenBank/DBJ databases.
CC -!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
CC -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
DR EMBL; AF061278; AAC62228.1; --

DR HSSP; P01343; 2GFI.
DR GO; GO:000576; C:extracellular; IEA.
DR GO; GO:0005179; F:hormone activity; IEA.
DR GO; GO:0007582; P:physiological processes; IEA.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.
DR PRINTS; PR00277; INSULIN.
DR SMART; SM00078; IIGF; 1.
DR PROSITE; PS00262; INSULIN; 1.
DR SEQUENCE 186 AA; 20547 MW; A501A548A9EB0FF CRC64;

Query Match 78.4%; Score 302; DB 13; Length 186;
Best Local Similarity 77.1%; Pred. No. 1.5e-31;
Matches 54; Conservative 9; Mismatches 5; Indels 2; Gaps 1;

Oy 1 GPETLCAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60
|||||
Db 45 GPETLCAELVDLTQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 102
|||||

Oy 61 CAPLKPAKSA 70
103 CAPAKTSKAA 112

RESULT 31
O7T1A7 PRELIMINARY; PRT; 186 AA.

ID O7T1A7
AC O7T1A7
DT 01-OCT-2003 (TrEMBLrel. 25, Created)
DT 01-OCT-2003 (TrEMBLrel. 25, Last sequence update)
DT 01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
DE Insulin-like growth factor I precursor.
GN IGF-1.
OS Perca flavescens (Yellow perch).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
OC Acanthomorpha; Acanthopterygii; Percomorpha; Perciformes; Percoidae;
OC Percidae; Perca.
OX NCBI_TaxID=8167;
RN [1]
RP SEQUENCE FROM N.A.
RA Lynn S.G., Shepherd B.S.;
RT "Cloning of insulin-like growth factor I from yellow perch (Perca
flavescens).";
RL Submitted (JUN-2003) to the EMBL/GenBank/DBJ databases.
RW EMBL; AY332492; AAP93861.1; --
KW Signal.
FT SIGNAL
SQ SEQUENCE 186 AA; 20545 MW; 4CB1028EA95E2D35 CRC64;

Query Match 78.4%; Score 302; DB 13; Length 186;
Best Local Similarity 77.1%; Pred. No. 1.5e-31;
Matches 54; Conservative 9; Mismatches 5; Indels 2; Gaps 1;

Oy 1 GPETLCAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60
|||||
Db 45 GPETLCAELVDLTQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 102
|||||

Oy 61 CAPLKPAKSA 70
103 CAPAKTSKAA 112

RESULT 32
O7T107 PRELIMINARY; PRT; 104 AA.

ID O7T107
AC O7T107
DT 01-OCT-2003 (TrEMBLrel. 25, Created).
DT 01-OCT-2003 (TrEMBLrel. 25, Last sequence update)
DT 01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
DE Insulin-like growth factor 1 (Fragment).
GN IGF1.

OS Dicotylarctus labrax (European sea bass).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
 OC Acanthomorpha; Acanthopterygii; Percomorpha; Perciformes; Percoidae;
 OC Moronidae; Dicentrarchus.
 OX NCBI_TaxID=13489;
 RN [1]
 RP SEQUENCE FROM N.A.
 RA Gilbert E., Villeneuve L.A.N., Cahu C., Zambonino-Infante J.L.;
 RT "Effect of vitamin A level during the development of sea bass
 (Dicentrarchus labrax) larvae."
 RL Submitted (JUL-2003) to the EMBL/GenBank/DBJ databases.
 DR EMBL; AJ579342; CAE18111.1; -;
 FT NON_TER 1
 FT NON_TER 104
 FT NON_TER 104
 SQ SEQUENCE 104 AA; 11339 MW; 50C569A80B8F6FF2 CRC64;
 Query Match 78.2%; Score 301; DB 13; Length 104;
 Best Local Similarity 77.1%; Pred. No. 1le-31;
 Matches 54; Conservative 8; Mismatches 6; Indels 2; Gaps 1;
 QY 1 GPETLCGAEALVDLQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLLEY 60
 Db 21 GPETLCGAEALVDLQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLLEY 78
 QY 61 CAPLKPAKSA 70
 Db 79 CAPAKTGRKA 88
 RESULT 33
 Q800N0 PRELIMINARY; PRT; 108 AA.
 AC Q800N0
 DT 01-JUN-2003 (TREMBlrel. 24, Created)
 DT 01-JUN-2003 (TREMBlrel. 24, Last sequence update)
 DT 01-OCT-2003 (TREMBlrel. 25, Last annotation update)
 DE Insulin-like growth factor I (Fragment).
 OS Morone chrysops x Morone saxatilis (White bass x Striped bass).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
 OC Acanthomorpha; Acanthopterygii; Percomorpha; Perciformes; Percoidae;
 OC Moronidae; Morone.
 OX NCBI_TaxID=45352;
 RN [1]
 RP SEQUENCE FROM N.A.
 RA Fruchtmann S., Hawkins M.B., Borski R.J.;
 RT "Cloning of IGF-I and the type I IGF receptor cDNAs from temperate
 bass species."
 RL Submitted (JUL-2001) to the EMBL/GenBank/DBJ databases.
 DR EMBL; AF402669; AAO73854.1; -;
 DR GO; GO:0005576; C:extracellular; IEA.
 DR GO; GO:0005179; F:hormone activity; IEA.
 DR GO; GO:0007582; P:physiological processes; IEA.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR InterPro; IPR003234; Mollusc_ins.
 DR Pfam; PF00049; Insulin; 1.
 DR PRINTS; PR00277; INSULIN.
 DR ProDom; PD015667; Mollusc_ins; 1.
 DR SMART; SM00078; IIGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 FT NON_TER 1
 FT NON_TER 108
 FT NON_TER 108
 SQ SEQUENCE 108 AA; 11768 MW; 7B946A89CC569A8 CRC64;
 Query Match 78.2%; Score 301; DB 13; Length 108;
 Best Local Similarity 77.1%; Pred. No. 1le-31;
 Matches 54; Conservative 8; Mismatches 6; Indels 2; Gaps 1;
 QY 1 GPETLCGAEALVDLQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLLEY 60
 Db 21 GPETLCGAEALVDLQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLLEY 78
 QY 61 CAPLKPAKSA 70
 Db 79 CAPAKTGRKA 88
 RESULT 34
 Q800M8 PRELIMINARY; PRT; 108 AA.
 AC Q800M8
 DT 01-JUN-2003 (TREMBlrel. 24, Created)
 DT 01-JUN-2003 (TREMBlrel. 24, Last sequence update)
 DT 01-OCT-2003 (TREMBlrel. 25, Last annotation update)
 DE Insulin-like growth factor I (Fragment).
 OS Morone saxatilis (Striped bass).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
 OC Acanthomorpha; Acanthopterygii; Percomorpha; Perciformes; Percoidae;
 OC Moronidae; Morone.
 OX NCBI_TaxID=34816;
 RN [1]
 RP SEQUENCE FROM N.A.
 RA Fruchtmann S., Hawkins M.B., Borski R.J.;
 RT "Cloning of IGF-I and the type I IGF receptor cDNAs from temperate
 bass species."
 RL Submitted (JUL-2001) to the EMBL/GenBank/DBJ databases.
 DR EMBL; AF402670; AAO73855.1; -;
 DR GO; GO:0005576; C:extracellular; IEA.
 DR GO; GO:0005179; F:hormone activity; IEA.
 DR GO; GO:0007582; P:physiological processes; IEA.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR InterPro; IPR003234; Mollusc_ins.
 DR Pfam; PF00049; Insulin; 1.
 DR PRINTS; PR00277; INSULIN.
 DR ProDom; PD015667; Mollusc_ins; 1.
 DR SMART; SM00078; IIGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 FT NON_TER 1
 FT NON_TER 108
 FT NON_TER 108
 SQ SEQUENCE 108 AA; 11768 MW; 7B946A89CC569A8 CRC64;
 Query Match 78.2%; Score 301; DB 13; Length 108;
 Best Local Similarity 77.1%; Pred. No. 1le-31;
 Matches 54; Conservative 8; Mismatches 6; Indels 2; Gaps 1;
 QY 1 GPETLCGAEALVDLQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLLEY 60
 Db 21 GPETLCGAEALVDLQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLLEY 78
 QY 61 CAPLKPAKSA 70
 Db 79 CAPAKTGRKA 88
 RESULT 35
 Q800M8 PRELIMINARY; PRT; 108 AA.
 AC Q800M8
 DT 01-JUN-2003 (TREMBlrel. 24, Created)
 DT 01-JUN-2003 (TREMBlrel. 24, Last sequence update)
 DT 01-OCT-2003 (TREMBlrel. 25, Last annotation update)
 DE Insulin-like growth factor I (Fragment).
 OS Morone chrysops (White bass).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
 OC Acanthomorpha; Acanthopterygii; Percomorpha; Perciformes; Percoidae;
 OC Moronidae; Morone.
 OX NCBI_TaxID=46259;
 RN [1]
 RP SEQUENCE FROM N.A.
 RA Fruchtmann S., Hawkins M.B., Borski R.J.;
 RT "Cloning of IGF-I and the type I IGF receptor cDNAs from temperate
 bass species."
 RL Submitted (JUL-2001) to the EMBL/GenBank/DBJ databases.

QY 61 CAPLKPAKSA 70
 Db 79 CAPAKTGRKA 88
 RESULT 34
 Q800M9 PRELIMINARY; PRT; 108 AA.
 AC Q800M9
 DT 01-JUN-2003 (TREMBlrel. 24, Created)
 DT 01-JUN-2003 (TREMBlrel. 24, Last sequence update)
 DT 01-OCT-2003 (TREMBlrel. 25, Last annotation update)
 DE Insulin-like growth factor I (Fragment).
 OS Morone saxatilis (Striped bass).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
 OC Acanthomorpha; Acanthopterygii; Percomorpha; Perciformes; Percoidae;
 OC Moronidae; Morone.
 OX NCBI_TaxID=34816;
 RN [1]
 RP SEQUENCE FROM N.A.
 RA Fruchtmann S., Hawkins M.B., Borski R.J.;
 RT "Cloning of IGF-I and the type I IGF receptor cDNAs from temperate
 bass species."
 RL Submitted (JUL-2001) to the EMBL/GenBank/DBJ databases.
 DR EMBL; AF402670; AAO73855.1; -;
 DR GO; GO:0005576; C:extracellular; IEA.
 DR GO; GO:0005179; F:hormone activity; IEA.
 DR GO; GO:0007582; P:physiological processes; IEA.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR InterPro; IPR003234; Mollusc_ins.
 DR Pfam; PF00049; Insulin; 1.
 DR PRINTS; PR00277; INSULIN.
 DR ProDom; PD015667; Mollusc_ins; 1.
 DR SMART; SM00078; IIGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 FT NON_TER 1
 FT NON_TER 108
 FT NON_TER 108
 SQ SEQUENCE 108 AA; 11768 MW; 7B946A89CC569A8 CRC64;
 Query Match 78.2%; Score 301; DB 13; Length 108;
 Best Local Similarity 77.1%; Pred. No. 1le-31;
 Matches 54; Conservative 8; Mismatches 6; Indels 2; Gaps 1;
 QY 1 GPETLCGAEALVDLQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLLEY 60
 Db 21 GPETLCGAEALVDLQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLLEY 78
 QY 61 CAPLKPAKSA 70
 Db 79 CAPAKTGRKA 88
 RESULT 35
 Q800M8 PRELIMINARY; PRT; 108 AA.
 AC Q800M8
 DT 01-JUN-2003 (TREMBlrel. 24, Created)
 DT 01-JUN-2003 (TREMBlrel. 24, Last sequence update)
 DT 01-OCT-2003 (TREMBlrel. 25, Last annotation update)
 DE Insulin-like growth factor I (Fragment).
 OS Morone chrysops (White bass).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
 OC Acanthomorpha; Acanthopterygii; Percomorpha; Perciformes; Percoidae;
 OC Moronidae; Morone.
 OX NCBI_TaxID=46259;
 RN [1]
 RP SEQUENCE FROM N.A.
 RA Fruchtmann S., Hawkins M.B., Borski R.J.;
 RT "Cloning of IGF-I and the type I IGF receptor cDNAs from temperate
 bass species."
 RL Submitted (JUL-2001) to the EMBL/GenBank/DBJ databases.

RT insulin-like growth factors gene and promoter region. ;
 RL Submitted (NOV-1997) to the EMBL/GenBank/DBJ databases.
 CC -!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
 CC -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
 DR EMBL; AF033796; AAB86652.1; -
 DR HSSP; P01343; 2GFI.
 DR GO; GO:0005576; C:extracellular; IEA.
 DR GO; GO:0005179; F:hormone activity; IEA.
 DR GO; GO:0007582; P:physiological processes; IEA.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR PRINTS; PR00277; INSULIN.
 DR SMART; SM00078; IIGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 KW SIGNAL.
 FT SIGNAL 1 44 POTENTIAL.
 FT CHAIN 45 182 INSULIN-LIKE GROWTH FACTOR I.
 SQ SEQUENCE 182 AA; 20136 MW; 2FICE0A3284D6CD1 CRC64;

Query Match 78.2%; Score 301; DB 13; Length 182;
 Best Local Similarity 79.4%; Pred. No. 1.9e-31;
 Matches 54; Conservative 7; Mismatches 5; Indels 2; Gaps 1;
 M 54; Conservative 7; Mismatches 5; Indels 2; Gaps 1;
 QY 1 GPEITLGGALVDLQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLRLY 60
 45 GPEITLGGALVDLQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLRLY 60
 Db 61 CAPLKPAP 68
 103 CAPVTPK 110

RESULT 39
 P79824 PRELIMINARY; PRT; 182 AA.
 AC P79824
 DT 01-MAY-1997 (TRENBLrel. 03, Created)
 DT 01-JUN-2003 (TRENBLrel. 24, Last sequence update)
 DE Prepro insulin-like growth factor I precursor.
 OS Oreochromis mossambicus (Mozambique tilapia) (Tilapia mossambica).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Actinopterygii; Neopterygii; Teleostei; Euteleostomi;
 OC Acanthomorpha; Acanthopterygii; Perciformes; Labroidae;
 OC Cichlidae; Oreochromis.
 CC -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
 DR EMBL; AJ010603; CAA09268.1; -
 DR HSSP; F01343; 2GFI.
 DR GO; GO:0005576; C:extracellular; IEA.
 DR GO; GO:0005179; F:hormone activity; IEA.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR PRINTS; PR00277; INSULIN.
 DR SMART; SM00078; IIGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 NCBI_TaxID=8127;
 SEQUENCE FROM N.A.
 MEDLINE=97418967; PubMed=9275043;
 RA Reinecke M, Schmid A C, Ermatinger R, Loffing-Cueni D N.;
 RT "insulin-like growth factor I in the teleost oreochromis mossambicus
 the Tilapia: Gene sequence, tissue expression and cellular
 localization.";
 RL Endocrinology 138:3613-3619(1997).
 CC -!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
 CC -!- SIMILARITY: BELONGS TO THE INSULIN/IGF/RELAXIN FAMILY.
 DR EMBL; Y10830; CAA71789.1; -
 DR HSSP; F01343; 2GFI.
 DR GO; GO:0005576; C:extracellular; IEA.
 DR GO; GO:0005179; F:hormone activity; IEA.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR PRINTS; PR00277; INSULIN.
 DR SMART; SM00078; IIGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 KW SIGNAL.
 FT SIGNAL 1 44 POTENTIAL.
 FT CHAIN 45 182 POTENTIAL.
 SQ SEQUENCE 182 AA; 20208 MW; DRAA54768CA4C24C CRC64;

Query Match 78.2%; Score 301; DB 13; Length 182;
 Best Local Similarity 79.4%; Pred. No. 1.9e-31;
 M 54; Conservative 7; Mismatches 5; Indels 2; Gaps 1;
 QY 1 GPEITLGGALVDLQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLRLY 60
 45 GPEITLGGALVDLQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLRLY 60
 Db 61 CAPLKPAP 68
 103 CAPVTPK 110

Matches 54; Conservative 7; Mismatches 5; Indels 2; Gaps 1;
 QY 1 GPEITLGGALVDLQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLRLY 60
 45 GPEITLGGALVDLQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLRLY 60
 Db 61 CAPLKPAP 68
 103 CAPVTPK 110

RESULT 40
 Q9PSX5 PRELIMINARY; PRT; 186 AA.
 AC Q9PSX5
 DT 01-MAY-2000 (TRENBLrel. 13, Created)
 DT 01-JUN-2003 (TRENBLrel. 24, Last sequence update)
 DE Preproinsulin-like growth factor Ib.
 GN IGF-1.
 OS Paralichthys olivaceus (Flounder).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
 OC Acanthomorpha; Acanthopterygii; Perciformes; Pleuronectiformes;
 OC Pleuronectoidae; Paralichthyidae; Paralichthys.
 CC -!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
 DR EMBL; AJ010603; CAA09268.1; -
 DR HSSP; F01343; 2GFI.
 DR GO; GO:0005576; C:extracellular; IEA.
 DR GO; GO:0005179; F:hormone activity; IEA.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR PRINTS; PR00277; INSULIN.
 DR SMART; SM00078; IIGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 NCBI_TaxID=8255;
 SEQUENCE FROM N.A.
 Kim D S.;
 RT "Expression of IGF-Ib cDNA clone isolated from Paralichthys olivaceus
 in mammalian CHO cell line using green fluorescence protein (GFP)
 tagging; secretory production of big IGF1b-GFP fusion proteins from
 stable transfected CHO cell culture.";
 RL Submitted (AUG-1998) to the EMBL/GenBank/DBJ databases.
 CC -!- SUBCELLULAR LOCATION: SECRETED (BY SIMILARITY).
 DR EMBL; AJ010603; CAA09268.1; -
 DR HSSP; F01343; 2GFI.
 DR GO; GO:0005576; C:extracellular; IEA.
 DR GO; GO:0005179; F:hormone activity; IEA.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR PRINTS; PR00277; INSULIN.
 DR SMART; SM00078; IIGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 NCBI_TaxID=8255;
 SEQUENCE 186 AA; 20529 MW; 479D12CEA95E3D75 CRC64;

Query Match 76.6%; Score 295; DB 13; Length 186;
 Best Local Similarity 75.7%; Pred. No. 1.2e-30;
 Matches 53; Conservative 9; Mismatches 6; Indels 2; Gaps 1;
 QY 1 GPEITLGGALVDLQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLRLY 60
 45 GPEITLGGALVDLQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLRLY 60
 QY 61 CAPLKPAP 70
 103 CAPAKTAKA 112
 Search completed: February 25, 2004, 06:24:30
 Job time : 39.8102 secs

GenCore version 5.1.6
Copyright (c) 1993 - 2004 Compugen Ltd.

OM protein - protein search, using sw model

Run on: February 25, 2004, 06:18:42 ; Search time 10.7299 Seconds
(without alignments)
339.696 Million cell updates/sec

Title: US-10-066-009A-1
Perfect score: 385
Sequence: 1 GPEYLCAELVDALQFVCGD.....SCDLRLEMYCAPLKPAKSA 70

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 141681 seqs, 52070155 residues 141681

Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : SwissProt_42*

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Table with columns: Result No., Score, Query Match %, Length, DB ID, Description. Contains 33 rows of search results.

Table with columns: ID, IGF1 CANFA, STANDARD, PRT, 122 AA. Lists various IGF1 sequences and their identifiers.

ALIGNMENTS

RESULT 1
IGF1_CANFA
AC P33712, STANDARD; PRT; 122 AA.
DT 01-FEB-1994 (Rel. 28, Created)
DT 01-FEB-1994 (Rel. 28, Last sequence update)
DT 10-OCT-2003 (Rel. 42, Last annotation update)
DE Insulin-like growth factor I precursor (IGF-I) (Somatomedin)
GN (Fragment)
DE IGF1 OR IGF1A.
OS Canis familiaris (Dog).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; Canis.
OX NCBI_TaxID=9615;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=93366192; PubMed=8359700;
RA Delafontaine P., Lou H., Harrison D.G., Bernstein K.E.;
RT "Sequence of a cDNA encoding dog insulin-like growth factor I.";
RL Gene 130:305-306(1993).
CC !- FUNCTION: The insulin-like growth factors, isolated from plasma,
CC are structurally and functionally related to insulin but have a
CC much higher growth-promoting activity.
CC !- SUBCELLULAR LOCATION: Secreted.
CC !- SIMILARITY: Belongs to the insulin family.
CC This SWISS-PROT entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use by non-profit institutions as long as its content is in no way
CC modified and this statement is not removed. Usage by and for commercial
CC entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC or send an email to licenses@isb-sib.ch).
CC
CC EMBL; L08254; -; NOT_ANNOTATED_CDS.
CC PIR; FN0622; PN0622.
CC HSSP; P01343; IGF1.
CC InterPro; IPR004825; Ins/IGF/relax.
CC Pfam; PF00049; Insulin; 1.
CC PRINTS; PR00277; INSULIN.
CC SMART; SM00078; IIGF; 1.
CC PROSITE; PS00262; INSULIN; 1.
CC Insulin family; Growth factor; Plasma; Signal.
FT NON TER 1 1
FT SIGNAL <1 19 BY SIMILARITY.
FT CEAIN 20 89 INSULIN-LIKE GROWTH FACTOR I.
FT DOMAIN 20 48 B.
FT DOMAIN 49 60 C.
FT DOMAIN 61 81 A.
FT DOMAIN 82 89 D.
FT PROPEP 90 122 E PEPTIDE.
FT DISULFD 25 67 BY SIMILARITY.
FT DISULFD 37 80 BY SIMILARITY.
FT DISULFD 66 71 BY SIMILARITY.
SQ SEQUENCE 122 AA; 13407 MW; 036A004DC44E7D75 CRC64;

Query Match 100.0%; Score 385; DB 1; Length 122;
 Best Local Similarity 100.0%; Pred. No. 1.4e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60
 Db 20 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 79

Qy 61 CAPLKPAKSA 70
 Db 80 CAPLKPAKSA 89

RESULT 2
 IGF1_HORSE STANDARD; PRT; 122 AA.

AC P51458;
 DT 01-OCT-1996 (Rel. 34, Created)
 DT 01-OCT-1996 (Rel. 34, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Insulin-like growth factor I precursor (IGF-I) (Somatomedin)
 DE (Fragment).
 GN IGF1.
 OS Equus caballus (Horse).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Perissodactyla; Equidae; Equus.
 OX NCBI_TaxID=9796;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Liver;
 RX MEDLINE=97013467; PubMed=860303;
 RA Ote K., Rozell B., Gessbo A., Engstrom W.;
 RT "Cloning and sequencing of an equine insulin-like growth factor I
 cDNA and its expression in fetal and adult tissues.";
 RL Gen. Comp. Endocrinol. 102:11-15(1996).
 CC -I- FUNCTION: The insulin-like growth factors, isolated from plasma,
 are structurally and functionally related to insulin but have a
 much higher growth-promoting activity.
 CC -I- SIMILARITY: Belongs to the insulin family.
 CC This SWISS-PROT entry is copyright. It is produced through a collaboration
 between the Swiss Institute of Bioinformatics and the EMBL outstation -
 the European Bioinformatics Institute. There are no restrictions on its
 use by non-profit institutions as long as its content is in no way
 modified and this statement is not removed. Usage by and for commercial
 entities requires a license agreement (See <http://www.isb-sib.ch/announce/>
 or send an email to license@isb-sib.ch).

EMBL; U28070; AAA68952.1; --
 DR HSSP; P01343; IGF1.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR PRINTS; PR00277; INSULIN.
 DR SMART; SM00078; IIGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 KW Insulin family; Growth factor; Plasma; Signal.
 FT SIGNAL ?
 FT PROPEP ? 48 BY SIMILARITY.
 FT CHAIN 49 118 INSULIN-LIKE GROWTH FACTOR I.
 FT DOMAIN 49 77 B.
 FT DOMAIN 78 89 C.
 FT DOMAIN 90 110 A.
 FT DOMAIN 111 118 D.
 FT PROPEP 119 >122 E PEPTIDE.
 FT DISULFID 54 95 BY SIMILARITY.
 FT DISULFID 66 109 BY SIMILARITY.
 FT DISULFID 95 100 BY SIMILARITY.
 FT NON TER 122 122 BY SIMILARITY.
 SQ SEQUENCE 122 AA; 5A935B334435C9F9 CRC64;

Query Match 100.0%; Score 385; DB 1; Length 122;
 Best Local Similarity 100.0%; Pred. No. 1.4e-40;

Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60
 Db 49 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 108

Qy 61 CAPLKPAKSA 70
 Db 109 CAPLKPAKSA 118

RESULT 3
 IGF1_CAVPO STANDARD; PRT; 130 AA.

AC P17637;
 DT 01-AUG-1990 (Rel. 15, Created)
 DT 01-AUG-1990 (Rel. 15, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
 GN IGF1.
 OS Cavia porcellus (Guinea pig).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Hystricognathi; Caviidae; Cavia.
 OX NCBI_TaxID=10141;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Pancreas;
 RX MEDLINE=90332447; PubMed=2377480;
 RA Bell G.I., Stempion M.M., Fong N.M., Scino S.;
 RT "Sequence of a cDNA encoding Guinea pig IGF-I";
 RL Nucleic Acids Res. 18:4275-4275(1990).
 CC -I- FUNCTION: The insulin-like growth factors, isolated from plasma,
 are structurally and functionally related to insulin but have a
 much higher growth-promoting activity.
 CC -I- SUBCELLULAR LOCATION: Secreted.
 CC -I- SIMILARITY: Belongs to the insulin family.
 CC This SWISS-PROT entry is copyright. It is produced through a collaboration
 between the Swiss Institute of Bioinformatics and the EMBL outstation -
 the European Bioinformatics Institute. There are no restrictions on its
 use by non-profit institutions as long as its content is in no way
 modified and this statement is not removed. Usage by and for commercial
 entities requires a license agreement (See <http://www.isb-sib.ch/announce/>
 or send an email to license@isb-sib.ch).

EMBL; X52951; CAA37127.1; --
 DR PIR; S12719; IGGP1.
 DR HSSP; P01343; IGF1.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR PRINTS; PR00277; INSULIN.
 DR SMART; SM00078; IIGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 KW Insulin family; Growth factor; Plasma; Signal.
 FT SIGNAL 1 25
 FT CHAIN 26 95 INSULIN-LIKE GROWTH FACTOR I.
 FT DOMAIN 26 54 B.
 FT DOMAIN 55 66 C.
 FT DOMAIN 67 87 A.
 FT DOMAIN 88 95 D.
 FT PROPEP 96 130 E PEPTIDE.
 FT DOMAIN 31 73 BY SIMILARITY.
 FT DISULFID 43 86 BY SIMILARITY.
 FT DISULFID 72 77 BY SIMILARITY.
 SQ SEQUENCE 130 AA; 14342 MW; 251B20AEDC5729FF CRC64;

Query Match 100.0%; Score 385; DB 1; Length 130;
 Best Local Similarity 100.0%; Pred. No. 1.5e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60
 Db 26 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 85

Oy 61 CAPLPAKSA 70
 Db 86 CAPLPAKSA 95

RESULT 4
 IGF1_PIG STANDARD; PRT; 153 AA.
 AC P16545;
 DT 01-AUG-1990 (Rel. 15, Created)
 DT 01-AUG-1990 (Rel. 15, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
 GN IGF1.
 OS Sus scrofa (Pig).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus.
 OX NCBI_TaxID=9823;
 EN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=90221822; PubMed=2326169;
 RA Mueller M., Brem G.;
 RT "Nucleotide sequence of porcine insulin-like growth factor. 1:5;
 RT untranslated region, exons 1 and 2 and mRNA.";
 RL Nucleic Acids Res. 18:364-364(1990).
 EN [2]
 RP SEQUENCE OF 20-153 FROM N.A.
 RX MEDLINE=89096956; PubMed=3211153;
 RA Tavakkol A., Simmen F.A., Simmen R.C.M.,
 RT "Porcine insulin-like growth factor-I (pIGF-I): complementary
 RT deoxyribonucleic acid cloning and uterine expression of messenger
 RT ribonucleic acid encoding evolutionarily conserved IGF-I peptides.";
 RL Mol. Endocrinol. 2:674-681(1988).
 EN [3]
 RP SEQUENCE OF 1-21 FROM N.A.
 RC STRAIN=White Landrace; TISSUE=Liver;
 RX MEDLINE=94128209; PubMed=8297476;
 RA Weller P.A., Dickson M.C., Huskisson N.S., Dauncey M.J., Buttery P.J.,
 RA Gilmour R.S.;
 RT "The porcine insulin-like growth factor-I gene: characterization and
 RT expression of alternate transcription sites.";
 RL J. Mol. Endocrinol. 11:201-211(1993)
 CC -!- FUNCTION: The insulin-like growth factors, isolated from plasma,
 CC are structurally and functionally related to insulin but have a
 CC much higher growth-promoting activity.
 CC -!- SUBCELLULAR LOCATION: Secreted.
 CC -!- SIMILARITY: Belongs to the insulin family.
 CC This SWISS-PROT entry is copyright. It is produced through a collaboration
 CC between the Swiss Institute of Bioinformatics and the EMBL outstation
 CC the European Bioinformatics Institute. There are no restrictions on its
 CC use by non-profit institutions as long as its content is in no way
 CC modified and this statement is not removed. Usage by and for commercial
 CC entities requires a license agreement (See [http://www.isb-sib.ch/](http://www.isb-sib.ch/announce/)
 CC or send an email to license@isb-sib.ch).
 DR EMBL; X17492; CAA35527.1; --
 DR EMBL; X52388; CAA36617.1; --
 DR EMBL; X52077; CAA36296.1; --
 DR EMBL; M31175; AAA31043.1; ALT_INIT.
 DR EMBL; X17638; CAA35632.1; --
 DR PIR; S12825; S12825.
 DR HSSP; P01343; IGF1.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR PRINTS; PR00277; INSULINB.
 DR SMART; SM00078; IIGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 DR Insulin family; Growth factor; Plasma; Signal.
 FT SIGNAL 1 ?
 FT PROPEL 2 48
 FT CHAIN 49 118 INSULIN-LIKE GROWTH FACTOR I.

ET DOMAIN 49 77 B.
 FT DOMAIN 78 89 C.
 FT DOMAIN 90 110 A.
 FT DOMAIN 111 118 D.
 FT PROPEL 119 153 E PEPTIDE.
 FT DISULFID 54 96 BY SIMILARITY.
 FT DISULFID 66 109 BY SIMILARITY.
 FT DISULFID 95 100 BY SIMILARITY.
 SQ SEQUENCE 153 AA; 17010 MW; 6098792DCDRA0CD7D CRC64;

Query Match 100.0%; Score 385; DB 1; Length 153;
 Best Local Similarity 100.0%; Pred. No. 1.8e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 1 GPEFLCGAEVLDALQFVCCGRGFRYFNKPTGYGSSRRAPQPTGIVDECCFRSCDLRLLEMY 60
 Db 49 GRETLCGAEVLDALQFVCCGRGFRYFNKPTGYGSSRRAPQPTGIVDECCFRSCDLRLLEMY 108

Oy 61 CAPLPAKSA 70
 Db 109 CAPLPAKSA 118

RESULT 5
 IGF1_HUMAN STANDARD; PRT; 153 AA.
 AC P01343;
 DT 21-JUL-1986 (Rel. 01, Created)
 DT 13-AUG-1987 (Rel. 05, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Insulin-like growth factor IA precursor (IGF-IA) (Somatomedin C).
 GN IGF1 OR IBP1.
 OS Homo sapiens (Human).
 OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
 OX NCBI_TaxID=9606;
 EN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=86168194; PubMed=2937782;
 RA Rotwein P., Pollock K.M., Didier D.K., Krivi G.G.;
 RT "Organization and sequence of the human insulin-like growth factor I
 RT gene. Alternative RNA processing produces two insulin-like growth
 RT factor I precursor peptides.";
 RL J. Biol. Chem. 261:4828-4832(1986).
 EN [2]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=84068210; PubMed=6358902;
 RA Jansen M., van Schaik F.M.A., Ricker A.T., Bullock B., Woods D.E.,
 RA Gabbay K.H., Nussbaum A.L., Sussenbach J.S., van den Brande J.L.;
 RT "Sequence of cDNA encoding human insulin-like growth factor I
 RT precursor.";
 RL Nature 306:609-611(1983).
 EN [3]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=86108910; PubMed=2935423;
 RA le Bouc Y., Drayer D., Jaeger F., Binoux M., Sondermeyer P.;
 RT "Complete characterization of the human IGF-I nucleotide sequence
 RT isolated from a newly constructed adult liver cDNA library.";
 RL FEBS Lett. 196:108-112(1986).
 EN [4]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=86108862; PubMed=3002851;
 RA de Pagter-Holthuisen P., van Schaik F.M.A., Verduijn G.M.,
 RA van Ommen G.J.B., Bouma B.N., Jansen M., Sussenbach J.S.;
 RT "Organization of the human genes for insulin-like growth factors I
 RT and II.";
 RL FEBS Lett. 195:179-184(1986).
 EN [5]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Liver;
 RX MEDLINE=91207342; PubMed=2018498;
 RA Steenbergh P.H., Koonen-Reemst A.M.C.B., Cleutjens C.B.J.M.,
 RA Sussenbach J.S.;

RT "Complete nucleotide sequence of the high molecular weight human
 IGF-I mRNA."
 RL Biochem. Biophys. Res. Commun. 175:507-514(1991).
 RN [6]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Brain;
 RX MEDLINE=92186627; PubMed=1372070;
 RA Sandberg Nordqvist A.C., Stahlnom P.A., Lake M., Sara V.R.;
 RT "Characterization of two cDNAs encoding insulin-like growth factor 1
 (IGF-I) in the human fetal brain."
 RL Brain Res. Mol. Brain Res. 12:275-277(1992).
 RN [7]
 RP SEQUENCE OF 24-50 AND 119-153 FROM N.A.
 RX MEDLINE=84295593; PubMed=6382022;
 RA Dull T.J., Gray A., Hayflick J.S., Ulrich A.;
 RT "Insulin-like growth factor II precursor gene organization in
 relation to insulin gene family."
 RL Nature 310:777-781(1984).
 RN [8]
 RP SEQUENCE OF 49-118.
 RX MEDLINE=78130171; PubMed=632300;
 RA Rinderknecht E, Humbel R.E.;
 RT "The amino acid sequence of human insulin-like growth factor I and
 its structural homology with proinsulin."
 RL J. Biol. Chem. 253:2769-2776(1978).
 RN [9]
 RP 3D-STRUCTURE MODELING.
 RX MEDLINE=83210259; PubMed=6189745;
 RA Blundell T.L., Bedarker S., Humbel R.E.;
 RT "Tertiary structures, receptor binding, and antigenicity of
 insulinlike growth factors."
 RL Fed. Proc. 42:2592-2597(1983).
 RN [10]
 RP STRUCTURE BY NMR.
 RX MEDLINE=91242464; PubMed=2036417;
 RA Cooke R.M., Harvey T.S., Campbell I.D.;
 RT "Solution structure of human insulin-like growth factor 1: a nuclear
 magnetic resonance and restrained molecular dynamics study."
 RL Biochemistry 30:5484-5491(1991).
 RN [11]
 RP STRUCTURE BY NMR.
 RX MEDLINE=92316903; PubMed=1319992;
 RA Sato A., Nishimura S., Okubo T., Kyogoku Y., Koyama S., Kobayashi M.,
 RA Yasuda T., Kobayashi Y.;
 RT "1H-NMR assignment and secondary structure of human insulin-like
 growth factor-I (IGF-I) in solution."
 RL J. Biochem. 111:529-536(1992).
 RN [12]
 RP DISULFIDE BONDS.
 RX MEDLINE=89207850; PubMed=3242681;
 RA Raschdorf F., Dahinden R., Maerki W., Richter W.J., Merryweather J.P.;
 RT "Location of disulphide bonds in human insulin-like growth factors
 (IGFs) synthesized by recombinant DNA technology."
 RL Biomed. Environ. Mass Spectrom. 16:3-8(1988).
 CC -|- FUNCTION: The insulin-like growth factors, isolated from plasma,
 CC are structurally and functionally related to insulin but have a
 CC much higher growth-promoting activity.
 CC -|- SUBCELLULAR LOCATION: Secreted.
 CC -|- ALTERNATIVE PRODUCTS:
 CC Event=Alternative splicing; Named isoforms=2;
 CC Name=IGF-IA;
 CC IsoId=P01343-1; Sequence=Displayed;
 CC Name=IGF-IB;
 CC IsoId=P05019-1; Sequence=External;
 CC -|- SIMILARITY: Belongs to the insulin family.
 CC -----
 CC This SWISS-PROT entry is copyright. It is produced through a collaboration
 CC between the Swiss Institute of Bioinformatics and the EMBL outstation
 CC the European Bioinformatics Institute. There are no restrictions on its
 CC use by non-profit institutions as long as its content is in no way
 CC modified and this statement is not removed. Usage by and for commercial
 CC entities requires a license agreement (See <http://www.isb-sib.ch/announce/>
 CC or send an email to license@isb-sib.ch).

CC EMBL; M44156; AA452538.1;
 DR EMBL; M12659; AA452538.1; JOINED.
 DR EMBL; M14153; AA452538.1; JOINED.
 DR EMBL; M14154; AA452538.1; JOINED.
 DR EMBL; X00173; CAA24998.1;
 DR EMBL; X03563; CAA27250.1; ALT_SEQ.
 DR EMBL; M27544; AA452787.1;
 DR EMBL; X03430; CAA27152.1;
 DR EMBL; X03421; CAA27153.1;
 DR EMBL; X03422; CAA27154.1;
 DR EMBL; X57025; CAA40342.1;
 DR EMBL; X56773; CAA40092.1;
 DR PIR; A92584; IGHU1.
 DR PDB; 1GFI; 15-OCT-94.
 DR PDB; 2GFI; 15-APR-93.
 DR PDB; 3GFI; 15-APR-93.
 DR PDB; 1B9G; 23-FEB-99.
 DR PDB; 1GZR; 02-OCT-02.
 DR PDB; 1GZY; 02-OCT-02.
 DR PDB; 1GZ2; 25-JUL-02.
 DR PDB; 1H02; 25-JUL-02.
 DR PDB; 1H59; 16-MAY-02.
 DR PDB; 1LXA; 03-OCT-01.
 DR Genew; HGNC:5464; IGFI.
 DR MIM; 147440;
 DR MIM; 265850;
 DR GO; GO:0005159; F:insulin-like growth factor receptor binding; TAS.
 DR GO; GO:0005180; F:peptide hormone; TAS.
 DR GO; GO:0006928; P:cell motility; TAS.
 DR GO; GO:0008260; P:DNA replication; TAS.
 DR GO; GO:0009441; P:glycolate metabolism; TAS.
 DR GO; GO:0007517; P:muscle development; TAS.
 DR GO; GO:0008284; P:positive regulation of cell proliferation; TAS.
 DR GO; GO:0007165; P:signal transduction; TAS.
 DR GO; GO:0004501; P:skeletal development; TAS.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR PRINTS; PRO0277; INSULINB.
 DR SMART; SMO0078; ILGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 KW Insulin family; Growth factor; Plasma; 3D-structure;
 KW Alternative splicing; Signal; Signal; POTENTIAL.
 FT SIGNAL 1 21
 FT PROPEP 22 48 INSULIN-LIKE GROWTH FACTOR IA.
 FT CHAIN 49 118 B.
 FT DOMAIN 49 77 C.
 FT DOMAIN 78 89 A.
 FT DOMAIN 90 110 D.
 FT DOMAIN 111 118 E PEPTIDE.
 FT PROPEP 119 133
 FT DISULFID 54 96
 FT DISULFID 66 109
 FT DISULFID 95 100
 FT STRAND 51 51
 FT TURN 55 55
 FT HELIX 56 69
 FT TURN 87 88
 FT HELIX 91 95
 FT TURN 96 97
 FT STRAND 99 99
 FT HELIX 106 109
 FT SEQUENCE 153 AA; 17026 MW; C6ECD92DCA9B37BC CRC64;

Query Match 100.0%; Score 385; DB 1; Length 153;
 Best Local Similarity 100.0%; Pred. No. 1.8e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 1 GPEITLGGALVLDALQFVCGDRGFYFNKPTGYGSSRRAPQTIIVDECCFRSCDLRRLLEY 60
 |||||
 Db 49 GPEITLGGALVLDALQFVCGDRGFYFNKPTGYGSSRRAPQTIIVDECCFRSCDLRRLLEY 108
 |||||

OY 61 CAPLKPAKSA 70
 DB 109 CAPLKPAKSA 118
 RESULT 6
 ID IGF1_BOVIN STANDARD; PRT; 154 AA.
 AC P07455;
 DT 01-APR-1988 (Rel. 07, Created)
 DT 01-NOV-1991 (Rel. 20, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
 GN IGF1.
 OS Bos taurus (Bovine).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Euthera; Cetartiodactyla; Ruminantia; Pecora; Bovidae;
 OC Bovidae; Bovinae; Bos.
 OX NCBI_TaxID=9913;
 RP SEQUENCE OF 2-154 FROM N.A.
 RX MEDLINE=90175014; PubMed=2308858;
 RA Fortis T., Murphy C., Cannon F.;
 RT "Nucleotide sequence of the bovine insulin-like growth factor 1
 (IGF-1) and its IGF-1A precursor";
 RL Nucleic Acids Res. 18:676-676(1990).
 RN [1]
 RP SEQUENCE OF 50-119 FROM N.A.
 RX MEDLINE=95172127; PubMed=7867698;
 RA Schmidt A., Einspanier R., Anselgruber W., Sinowatz F., Schams D.;
 RT "Expression of insulin-like growth factor 1 (IGF-1) in the bovine
 oviduct during the oestrous cycle";
 RL Exp. Clin. Endocrinol. 102:364-369(1994).
 RN [3]
 RP SEQUENCE OF 50-119.
 RX MEDLINE=86095881; PubMed=3941093;
 RA Honegger A., Humbel R.E.;
 RT "Insulin-like growth factors I and II in fetal and adult bovine
 serum. Purification, primary structures, and immunological
 cross-reactivities";
 RL J. Biol. Chem. 261:569-575(1986).
 RN [4]
 RP SEQUENCE OF 50-119.
 RX MEDLINE=88268820; PubMed=3390164;
 RA Francis G.L., Upton F.M., Ballard F.J., McNeil K.A., Wallace J.C.;
 RT "Insulin-like growth factors 1 and 2 in bovine colostrum. Sequences
 and biological activities compared with those of a potent truncated
 form";
 RL Biochem. J. 251:95-103(1988).
 CC -!- FUNCTION: The insulin-like growth factors, isolated from plasma,
 are structurally and functionally related to insulin but have a
 much higher growth-promoting activity.
 CC -!- SUBCELLULAR LOCATION: Secreted.
 CC -!- SIMILARITY: Belongs to the insulin family.
 CC
 CC This SWISS-PROT entry is copyright. It is produced through a collaboration
 between the Swiss Institute of Bioinformatics and the EMBL outstation -
 the European Bioinformatics Institute. There are no restrictions on its
 use by non-profit institutions as long as its content is in no way
 modified and this statement is not removed. Usage by and for commercial
 entities requires a license agreement (See <http://www.isb-sib.ch/announce/>
 or send an email to license@isb-sib.ch).
 CC
 CC EMBL; X15726; CAA33746.1; -
 CC EMBL; S76122; AAD14209.1; -
 CC PIR; S12672; IGB01.
 CC HSP; P01343; IGF1.
 CC InterPro; IPR004825; Ins/IGF/relax.
 CC Pfam; PF00049; Insulin; 1.
 CC PRINTS; PR00277; INSULINB.
 CC SMART; SM00078; IIGF; 1.
 CC PROSITE; PS00262; INSULIN; 1.
 CC Insulin family; Growth factor; Plasma; Signal.
 KW

FT SIGNAL 1 ?
 FT PROPEP ? 49
 FT CHAIN 50 119 INSULIN-LIKE GROWTH FACTOR I.
 FT DOMAIN 50 78 B.
 FT DOMAIN 79 90 C.
 FT DOMAIN 91 111 A.
 FT DOMAIN 112 119 D.
 FT PROPEP 120 154 E PEPTIDE.
 FT DISULFID 120 154 BY SIMILARITY.
 FT DISULFID 55 97 BY SIMILARITY.
 FT DISULFID 67 110 BY SIMILARITY.
 FT DISULFID 96 101 BY SIMILARITY.
 SQ SEQUENCE 154 AA; 17066 MW; 64201B6AF3140999 CRC64;
 Query Match 100.0%; Score 385; DB 1; Length 154;
 Best Local Similarity 100.0%; Pred. No. 1.8e-40; Gaps 0;
 Matches 70; Conservative 0; Mismatches 0; Indels 0;
 OY 1 GPETLCGAEIVLDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRY 60
 DB 50 GPETLCGAEIVLDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRY 109
 OY 61 CAPLKPAKSA 70
 DB 110 CAPLKPAKSA 119
 RESULT 7
 IGF1_HUMAN STANDARD; PRT; 195 AA.
 AC P05019;
 DT 13-AUG-1987 (Rel. 05, Created)
 DT 13-AUG-1987 (Rel. 05, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Insulin-like growth factor IB precursor (IGF-IB) (Somatomedin C).
 GN IGF1 OR IGBP.
 OS Homo sapiens (Human).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Euthera; Primates; Catarrhini; Hominidae; Homo.
 OX NCBI_TaxID=9606;
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=86168194; PubMed=2937782;
 RA Rotwein P., Follock K.M., Didier D.K., Krivi G.G.;
 RT "Organization and sequence of the human insulin-like growth factor I
 gene. Alternative RNA processing produces two insulin-like growth
 factor I precursor peptides";
 RL J. Biol. Chem. 261:4828-4832(1986).
 RN [2]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=86094355; PubMed=3455760;
 RA Rotwein P.;
 RT "Two insulin-like growth factor I messenger RNAs are expressed in
 human liver";
 RL Proc. Natl. Acad. Sci. U.S.A. 83:77-81(1986).
 RN [3]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=86108862; PubMed=3028851;
 RA de Pagter-Holthuisen P., van Schaik F.M.A., Verduijn G.M.,
 RA van Ommen G.J.B., Bouna B.N., Jansen M., Sussenbach J.S.;
 RT "Organization of the human genes for insulin-like growth factors I
 and II";
 RL FEBS Lett. 195:179-184(1986).
 RN [4]
 RP SEQUENCE OF 22-50 FROM N.A.
 RX MEDLINE=84295593; PubMed=6382022;
 RA Dull T.J., Gray A., Hayflick J.S., Ullrich A.;
 RT "Insulin-like growth factor II precursor gene organization in
 relation to insulin gene family";
 RL Nature 310:777-781(1984).
 RN [5]
 RP SEQUENCE OF 49-118.
 RX MEDLINE=78130171; PubMed=632300;
 RA Rinderknecht E., Humbel R.E.;

RT "The amino acid sequence of human insulin-like growth factor I and its structural homology with proinsulin.";

RL J. Biol. Chem. 253:2769-2776 (1978).

RN [6]

RP 3D-STRUCTURE MODELING.

RX MEDLINE=83210259; PubMed=6189745;

RA Blundell T.L., Bedarkar S., Humbel R.E.;

RT "tertiary structures, receptor binding, and antigenicity of insulinlike growth factors.";

RL Fed. Proc. 42:2592-2597(1983).

RN [7]

RP STRUCTURE BY NMR.

RX MEDLINE=91242464; PubMed=2036417;

RA Cooke R.M., Harvey T.S., Campbell I.D.;

RT "Solution structure of human insulin-like growth factor 1: a nuclear magnetic resonance and restrained molecular dynamics study.";

RL Biochemistry 30:5484-5491(1991).

RN [8]

RP STRUCTURE BY NMR.

RX MEDLINE=92316903; PubMed=1319992;

RA Sato A., Nishimura S., Ohkubo T., Kyogoku Y., Kobayashi M., Yasuda T., Kobayashi Y.;

RT "1H-NMR assignment and secondary structure of human insulin-like growth factor-I (IGF-I) in solution.";

RL J. Biochem. 111:529-536(1992).

RN [9]

RP DISULFIDE BONDS.

RX MEDLINE=89207850; PubMed=3242681;

RA Raschdorf F., Dahinden R., Maerki W., Richter W.J., Merryweather J.P.;

RT "Location of disulfide bonds in human insulin-like growth factors (IGFs) synthesized by recombinant DNA technology.";

RL Biomed. Environ. Mass Spectrom. 16:13-8(1988).

RN [10]

RP VARIANT ASP-187.

RX MEDLINE=99318093; PubMed=10391209;

RA Cargill M., Altschuler D., Ireland J., Sklar P., Ardlie K., Patil N., Shaw N., Lane C.R., Lim E.P., Kalyanaraman N., Nemesh J., Ziaugra L., Friedland L., Rolfe A., Warrington J., Lipshutz R., Daley G.Q., Lander E.S.;

RT "Characterization of single-nucleotide polymorphisms in coding regions of human genes.";

RL Nat. Genet. 22:231-238(1999).

RN [11]

RP ERRATUM.

RA Cargill M., Altschuler D., Ireland J., Sklar P., Ardlie K., Patil N., Shaw N., Lane C.R., Lim E.P., Kalyanaraman N., Nemesh J., Ziaugra L., Friedland L., Rolfe A., Warrington J., Lipshutz R., Daley G.Q., Lander E.S.;

RT "Characterization of single-nucleotide polymorphisms in coding regions of human genes.";

RL Nat. Genet. 22:231-238(1999).

RN [12]

RP FUNCTION: The insulin-like growth factors, isolated from plasma, are structurally and functionally related to insulin but have a much higher growth-promoting activity.

CC -|- SUBCELLULAR LOCATION: Secreted.

CC -|- ALTERNATIVE PRODUCTS:

CC Event=Alternative splicing; Named isoforms=2;

CC Name=IGF-IB;

CC IsoId=P05019-1; Sequence=Displayed;

CC Name=IGF-IA;

CC IsoId=P01343-1; Sequence=External;

CC -|- SIMILARITY: Belongs to the insulin family.

CC This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement. (See http://www.isb-sib.ch/announce/ or send an email to license@isb-sib.ch).

CC -----

CC EMBL; M14155; AAA52537.1; -

CC EMBL; M12659; AAA52537.1; JOINED.

CC EMBL; M14153; AAA52537.1; JOINED.

CC EMBL; M14154; AAA52537.1; JOINED.

DR EMBL; M11568; AAA52539.1; -

DR EMBL; X03563; CAA27250.1; ALT_SEQ.

DR EMBL; X03420; CAA27152.1; -

DR EMBL; X03421; CAA27153.1; -

DR EMBL; X03422; CAA27154.1; -

DR FIR; A01611; IGHULB.

DR PDB; 1GFI; 15-OCT-94.

DR PDB; 2GFI; 15-APR-93.

DR PDB; 3GFI; 15-APR-93.

DR PDB; 1EOT; 18-MAY-99.

DR Genew; HGNC:5464; IGF1.

DR MIM; 147440; -

DR MIM; 265850; -

DR GO; GO:0005159; F:insulin-like growth factor receptor binding; TAS.

DR GO; GO:0005180; F:peptide hormone; TAS.

DR GO; GO:0006928; P:cell motility; TAS.

DR GO; GO:0006260; P:DNA replication; TAS.

DR GO; GO:0005441; P:glycolate metabolism; TAS.

DR GO; GO:0007517; P:muscle development; TAS.

DR GO; GO:0008284; P:positive regulation of cell proliferation; TAS.

DR GO; GO:0007265; P:RAS protein signal transduction; TAS.

DR GO; GO:0007165; P:signal transduction; TAS.

DR GO; GO:0001501; P:skeletal development; TAS.

DR InterPro; IPR004825; Ins/IGF/relax.

DR Pfam; PF00049; Insulin; 1.

DR PRINTS; PRO0277; INSULINB.

DR SMART; SM00078; IIGF; 1.

DR PROSITE; PS00262; INSULIN; 1.

DR Insulin family; Growth factor; 3D-structure; Plasma;

KW Alternative splicing; Signal; Polymorphism; POTENTIAL.

FT SIGNAL 1 21

FT PROPEP 22 48

FT CHAIN 49 118

FT DOMAIN 49 77

FT DOMAIN 78 89

FT DOMAIN 90 110

FT DOMAIN 111 118

FT PROPEP 119 195

FT DISULFID 24 96

FT DISULFID 95 109

FT VARIANT 187 187

FT STRAND 51 51

FT TURN 55 55

FT HELIX 56 69

FT TURN 87 88

FT HELIX 91 95

FT TURN 96 97

FT STRAND 99 99

FT HELIX 106 109

FT SEQUENCE 195 AA; 21841 MW; E88A8CFBD1CD1873 CRC64;

Query Match 100.0%; Score 385; DB 1; Length 195;

Best Local Similarity 100.0%; Pred. No. 2.4e-40;

Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPETLCGAEIVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIYDECCFRSCDLRLEMY 60

DB 49 GPETLCGAEIVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIYDECCFRSCDLRLEMY 108

QY 61 CAPLKPAKSA 70

DB 109 CAPLKPAKSA 118

RESULT 8

IGF1_SUNMU IGF1_SUNMU STANDARD; PRT; 81 AA.

ID IGFL_SUNMU Q28933;

AC Q28933;

DT 16-OCT-2001 (Rel. 40, Created)

DT 16-OCT-2001 (Rel. 40, Last sequence update)

DT 10-OCT-2003 (Rel. 42, Last annotation update)

DE Insulin-like growth factor I precursor (IGF-I) (Somatomedin)
DE (Fragment).
GN IGF1.
OS Suncus murinus (House shrew) (Musk shrew).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Insectivora; Soricidae; Crocidurinae; Suncus.
OX NCBI_TaxID=9378;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=BAN, and NAG; TISSUE=Liver;
RA Ishikawa A.;
RT "Partial sequence of a IGF-I cDNA in the musk shrew, Suncus murinus.";
RL Submitted (DEC-1994) to the EMBL/GenBank/DBJ databases.
CC -1- FUNCTION: The insulin-like growth factors, isolated from plasma,
CC are structurally and functionally related to insulin but have a
CC much higher growth-promoting activity.
CC -1- SUBCELLULAR LOCATION: Secreted.
CC -1- SIMILARITY: Belongs to the insulin family.
CC
CC This SWISS-PROT entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use by non-profit institutions as long as its content is in no way
CC modified and this statement is not removed. Usage by and for commercial
CC entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC or send an email to license@isb-sib.ch).
CC -----
DR EMBL; D43957; BAA07897.1; -
DR HSP; P01343; IGF1.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.
DR PRINTS; PR00276; INSULINA.
DR PRINTS; PR00277; INSULINB.
DR SMART; SM00078; IIGF; 1.
DR PROSITE; PS00262; INSULIN; 1.
DR Insulin family; Growth factor; Plasma.
KW NON_TER 1 1
FT PROPEP <1 4 BY SIMILARITY.
FT CHAIN 5 74 INSULIN-LIKE GROWTH FACTOR I.
FT DOMAIN 5 33 B.
FT DOMAIN 34 45 C.
FT DOMAIN 46 66 A.
FT DOMAIN 67 74 D.
FT PROPEP 75 >81 E PEPTIDE.
FT DISULFID 10 52 BY SIMILARITY.
FT DISULFID 22 65 BY SIMILARITY.
FT DISULFID 51 56 BY SIMILARITY.
FT NON_TER 81 81
SQ SEQUENCE 81 AA; 8869 MW; AC2C40972D05E3C4 CRC64;
Query Match 99.2%; Score 382; DB 1; Length 81;
Best Local Similarity 98.6%; Pred. No. 2.2e-40;
Matches 69; Conservative 1; Mismatches 0; Indels 0; Gaps 0;
Oy 1 GPETLCAELVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLLEY 60
Db 5 GPETLCAELVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLLEY 64
Oy 61 CAPLKPAKSA 70
Db 65 CAPLKPAKSA 74
RESULT 9
ID IGF1_RABIT STANDARD; PRT; 143 AA.
AC Q95222; O18846;
DT 01-NOV-1997 (Rel. 35, Created)
DT 16-OCT-2001 (Rel. 40, Last sequence update)
DT 10-OCT-2003 (Rel. 42, Last annotation update)
DE Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
GN IGF1 OR IGF-1.
OS Oryctolagus cuniculus (Rabbit).

OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolagus.
OX NCBI_TaxID=9986;
RN [1]
RP SEQUENCE FROM N.A. (ISOFORM IGF-IA).
RC STRAIN=ZIKA, TISSUE=Liver;
RA Flekna G., Brem G., Mueller M.;
RL Submitted (NOV-1996) to the EMBL/GenBank/DBJ databases.
RN SEQUENCE FROM N.A. (ISOFORM IGF-IB).
RC STRAIN=ZIKA, TISSUE=Liver;
RA Flekna G., Brem G., Mueller M.;
RL Submitted (SEP-1997) to the EMBL/GenBank/DBJ databases.
CC -1- FUNCTION: The insulin-like growth factors, isolated from plasma,
CC are structurally and functionally related to insulin but have a
CC much higher growth-promoting activity.
CC -1- SUBCELLULAR LOCATION: Secreted.
CC -1- ALTERNATIVE PRODUCTS:
CC Name=IGF-IB;
CC IsoId=O95222-1; Sequences=Displayed;
CC Name=IGF-IA;
CC IsoId=O95222-2; Sequence=VSP_002705;
CC -1- SIMILARITY: Belongs to the insulin family.
CC -----
CC This SWISS-PROT entry is copyright. It is produced through a collaboration
CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC the European Bioinformatics Institute. There are no restrictions on its
CC use by non-profit institutions as long as its content is in no way
CC modified and this statement is not removed. Usage by and for commercial
CC entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC or send an email to license@isb-sib.ch).
CC -----
DR EMBL; U75390; AAB48032.1; -
DR HSP; AF022961; AAB80950.1; -
DR HSP; P01343; IGF1.
DR InterPro; IPR004825; Ins/IGF/relax.
DR Pfam; PF00049; Insulin; 1.
DR PRINTS; PR00277; INSULINB.
DR SMART; SM00078; IIGF; 1.
DR PROSITE; PS00262; INSULIN; 1.
DR Insulin family; Growth factor; Plasma; Signal; Alternative splicing.-
KW SIGNAL 1 32 POTENTIAL.
FT CHAIN 33 102 INSULIN-LIKE GROWTH FACTOR I.
FT PROPEP 103 143 E PEPTIDE.
FT DOMAIN 33 61 B.
FT DOMAIN 62 73 C.
FT DOMAIN 74 94 A.
FT DOMAIN 95 102 D.
FT DISULFID 38 80 BY SIMILARITY.
FT DISULFID 50 93 BY SIMILARITY.
FT DISULFID 79 84 BY SIMILARITY.
FT VARSPPLIC 119 143 YQPFSTKMKSKQRKRGSTEEHK -> EYHLKNTSRGSA
GNKRYRM (in isoform IGF-IA).
FT FT /FTIG=VSP_002705.
SQ SEQUENCE 143 AA; 16091 MW; 819AF577800A1B1A CRC64;
Query Match 99.2%; Score 382; DB 1; Length 143;
Best Local Similarity 98.6%; Pred. No. 4e-40;
Matches 69; Conservative 1; Mismatches 0; Indels 0; Gaps 0;
Oy 1 GPETLCAELVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLLEY 60
Db 33 GPETLCAELVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLLEY 92
Oy 61 CAPLKPAKSA 70
Db 93 CAPLKPAKSA 102
RESULT 10
ID IGF1_CAPHI STANDARD; PRT; 154 AA.
ID IGF1_CAPHI

CC This SWISS-PROT entry is copyright. It is produced through a collaboration
 CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
 CC the European Bioinformatics Institute. There are no restrictions on its
 CC use by non-profit institutions as long as its content is in no way
 CC modified and this statement is not removed. Usage by and for commercial
 CC entities requires a license agreement (see http://www.isb-sib.ch/announce/
 CC or send an email to license@isb-sib.ch).

CC EMBL; X06043; CAA29436.1; -
 DR EMBL; M15651; AAA41215.1; -
 DR EMBL; M15647; AAA41215.1; JOINED.
 DR EMBL; M15648; AAA41215.1; JOINED.
 DR EMBL; M15649; AAA41215.1; JOINED.
 DR EMBL; M17724; AAA41227.1; -
 DR EMBL; M17335; AAA41386.1; ALT_INIT.
 DR EMBL; M15481; AAA41387.1; ALT_INIT.
 DR FIR; B27804; B27804.
 DR HSSP; P01343; IGFI.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR PRINTS; PRO0277; INSULINB.
 DR SMART; SM00078; IIGF; 1.
 DR SIGNAL 1 ?
 DR Insulin family; Growth factor; Plasma; Alternative splicing; Signal.
 KW Insulin family; Growth factor; Plasma; Alternative splicing; Signal.
 FT SIGNAL 1 ?
 FT CHAIN ? 48 INSULIN-LIKE GROWTH FACTOR IA.
 FT DOMAIN 49 118 E.
 FT DOMAIN 43 77 B.
 FT DOMAIN 78 89 C.
 FT DOMAIN 90 110 D.
 FT DOMAIN 111 118 A.
 FT DOMAIN 119 153 D.
 FT DISULFID 54 96 E PEPTIDE.
 FT DISULFID 66 109 BY SIMILARITY.
 FT DISULFID 95 100 BY SIMILARITY.
 FT CONFLICT 110 112 APL -> VRC (IN REF. 4).
 SQ SEQUENCE 153 AA; 17079 MW; 966F3C0FA4EB3DE7 CRC64;

Query Match 95.6%; Score 368; DB 1; Length 153;
 Best Local Similarity 95.7%; Pred. No. 2.3e-38;
 Matches 67; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

OY 1 GPETLCGAEVLVALQFVCGDRGFYFNKFTYGVSSRRAPQIGVDECCFRSCLRLREMY 60
 DB 49 GPETLCGAEVLVALQFVCGDRGFYFNKFTYGVSSRRAPQIGVDECCFRSCLRLREMY 108
 OY 61 CAPLKPAKSA 70
 DB 109 CAPLKPAKSA 118

RESULT 13
 IGF1_RAT STANDARD; PRT; 181 AA.
 AC P08024;
 DT 01-AUG-1988 (Rel. 08, Created)
 DT 01-FEB-1991 (Rel. 17, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Insulin-like growth factor IB precursor (IGF-IB) (Somatomedin).
 GN IGF1 OR IGF-1.
 OS Rattus norvegicus (Rat).
 OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
 OX NCBI_TaxID=10116;
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=8722423; PubMed=3034909;
 RA Shimatsu A., Rotwein P.;
 RT "Mosaic evolution of the insulin-like growth factors. Organization,
 RT sequence, and expression of the rat insulin-like growth factor I
 RT gene";
 RL J. Biol. Chem. 262:7894-7900 (1987).
 RN [2]

RP SEQUENCE FROM N.A.
 RX MEDLINE=88015572; PubMed=3658684;
 RA Shimatsu A., Rotwein P.;
 RT "Sequence of two rat insulin-like growth factor I mRNAs differing
 RT within the 5' untranslated region";
 RL Nucleic Acids Res. 15:7196-7196 (1987).
 RN [3]

RP SEQUENCE FROM N.A.
 RX MEDLINE=89127259; PubMed=3221878;
 RA Roberts C.T., Lasky S.R., Lowe W.L., Seaman W.T., Lerioth D.;
 RT "Structure of the rat insulin-like growth factor II transcriptional
 RT unit: heterogeneous transcripts are generated from two promoters by
 RT use of multiple polyadenylation sites and differential ribonucleic
 RT acid splicing";
 RL Mol. Endocrinol. 2:1115-1126 (1988).
 RN [4]

RP SEQUENCE OF 49-118.
 RX MEDLINE=89174609; PubMed=2538424;
 RA Tamura K., Kobayashi M., Ishii Y., Tamura T., Hashimoto K.,
 RA Nakamura S., Niwa M., Zapf J.;
 RT "Primary structure of rat insulin-like growth factor-I and its
 RT biological activities";
 RL J. Biol. Chem. 264:5616-5621 (1989).
 CC !- FUNCTION: The insulin-like growth factors, isolated from plasma,
 CC are structurally and functionally related to insulin but have a
 CC much higher growth-promoting activity.
 CC !- SUBCELLULAR LOCATION: Secreted.
 CC !- ALTERNATIVE PRODUCTS:
 CC Event-Alternative splicing; Named isoforms=2;
 CC Name=IGF-IB;
 CC IsoId=P08024-1; Sequence=Displayed;
 CC Name=IGF-IA;
 CC IsoId=P08025-1; Sequence=External;
 CC !- SIMILARITY: Belongs to the insulin family.
 CC
 CC This SWISS-PROT entry is copyright. It is produced through a collaboration
 CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
 CC the European Bioinformatics Institute. There are no restrictions on its
 CC use by non-profit institutions as long as its content is in no way
 CC modified and this statement is not removed. Usage by and for commercial
 CC entities requires a license agreement (see http://www.isb-sib.ch/announce/
 CC or send an email to license@isb-sib.ch).

DR EMBL; M15650; AAA41214.1; -
 DR EMBL; M15647; AAA41214.1; JOINED.
 DR EMBL; M15648; AAA41214.1; JOINED.
 DR EMBL; M15649; AAA41214.1; JOINED.
 DR EMBL; X06107; CAA29480.1; ALT_SEQ.
 DR EMBL; M15480; AAA41385.1; ALT_SEQ.
 DR FIR; A27804; A27804.
 DR HSSP; F01343; IGFI.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR PRINTS; PRO0277; INSULINB.
 DR SMART; SM00078; IIGF; 1.
 DR SMART; SM00078; IIGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 KW Insulin family; Growth factor; Plasma; Alternative splicing; Signal.
 FT SIGNAL 1 ?
 FT PROPEP ? 48
 FT CHAIN 49 118 INSULIN-LIKE GROWTH FACTOR IB.
 FT DOMAIN 49 77 B.
 FT DOMAIN 78 89 C.
 FT DOMAIN 90 110 A.
 FT DOMAIN 111 118 D.
 FT PROPEP 119 181 E PEPTIDE.
 FT DISULFID 54 96 BY SIMILARITY.
 FT DISULFID 66 109 BY SIMILARITY.
 FT DISULFID 95 100 BY SIMILARITY.
 FT CONFLICT 110 112 APL -> VRC (IN REF. 2).
 SQ SEQUENCE 181 AA; 20322 MW; 52BAB431875A1A06 CRC64;

Query Match 95.6%; Score 368; DB 1; Length 181;
 Best Local Similarity 95.7%; Pred. No. 2.8e-38;

DR EMBL; M15650; AAA41214.1; -
 DR EMBL; M15647; AAA41214.1; JOINED.
 DR EMBL; M15648; AAA41214.1; JOINED.
 DR EMBL; M15649; AAA41214.1; JOINED.
 DR EMBL; X06107; CAA29480.1; ALT_SEQ.
 DR EMBL; M15480; AAA41385.1; ALT_SEQ.
 DR FIR; A27804; A27804.
 DR HSSP; F01343; IGFI.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR PRINTS; PRO0277; INSULINB.
 DR SMART; SM00078; IIGF; 1.
 DR SMART; SM00078; IIGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 KW Insulin family; Growth factor; Plasma; Alternative splicing; Signal.
 FT SIGNAL 1 ?
 FT PROPEP ? 48
 FT CHAIN 49 118 INSULIN-LIKE GROWTH FACTOR IB.
 FT DOMAIN 49 77 B.
 FT DOMAIN 78 89 C.
 FT DOMAIN 90 110 A.
 FT DOMAIN 111 118 D.
 FT PROPEP 119 181 E PEPTIDE.
 FT DISULFID 54 96 BY SIMILARITY.
 FT DISULFID 66 109 BY SIMILARITY.
 FT DISULFID 95 100 BY SIMILARITY.
 FT CONFLICT 110 112 APL -> VRC (IN REF. 2).
 SQ SEQUENCE 181 AA; 20322 MW; 52BAB431875A1A06 CRC64;

Matches 67; Conservative 0; Mismatches 3; Indels 0; Gaps 0;
 QY 1 GPEITLCAELVDALQVCGDRGFYFNKPTGYGSSRRAPQTGVDECCFRSCDLRLLEMY 60
 49 GPEITLCAELVDALQVCGDRGFYFNKPTGYGSSRRAPQTGVDECCFRSCDLRLLEMY 108
 QY 61 CAPLKPAKSA 70
 DB 109 CAPLKPTKSA 118

RESULT 14
 IGFA_MOUSE
 ID IGFA_MOUSE STANDARD; PRT; 127 AA.
 AC P05017;
 DT 13-AUG-1987 (Rel. 05, Created)
 DT 13-AUG-1987 (Rel. 05, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Insulin-like growth factor IA precursor (IGF-IA) (Somatomedin).
 GN IGF1 OR IGF-1.
 OS Mus musculus (Mouse).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
 OX NCBI_TaxID=10090;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Liver;
 RX MEDLINE=87040760; PubMed=3774549;
 RA Bell G.I., Stempin M.M., Fong N.M., Rall L.B.;
 RT "Sequences of liver cDNAs encoding two different mouse insulin-like
 growth factor I precursors."
 RL Nucleic Acids Res. 14:7873-7882(1986).
 CC -!- FUNCTION: The insulin-like growth factors, isolated from plasma,
 CC are structurally and functionally related to insulin but have a
 CC much higher growth-promoting activity.
 CC -!- SUBCELLULAR LOCATION: Secreted.
 CC -!- ALTERNATIVE PRODUCTS:
 CC Event=Alternative splicing; Named isoforms=2;
 CC Name=IGF-IA;
 CC IsoId=P05017-1; Sequence=Displayed;
 CC Name=IGF-IB;
 CC IsoId=P05018-1; Sequence=External;
 CC -!- SIMILARITY: Belongs to the insulin family.

CC This SWISS-PROT entry is copyright. It is produced through a collaboration
 CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
 CC the European Bioinformatics Institute. There are no restrictions on its
 CC use by non-profit institutions as long as its content is in no way
 CC modified and this statement is not removed. Usage by and for commercial
 CC entities requires a license agreement (See <http://www.isb-sib.ch/announce/>
 CC or send an email to license@isb-sib.ch).
 CC -----
 DR EMBL; X04480; CRA28168.1; -
 DR PIR; A25540; A25540.
 DR HSSP; P01343; IGF1.
 DR MGD; MGI:96432; Igf1.
 DR GO; GO:0010001; P:glial cell differentiation; IMP.
 DR GO; GO:0007399; P:neurogenesis; IMP.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR SMART; PR00277; INSULINB.
 DR SMART; SM00078; IGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 KW Insulin family; Growth factor; Plasma; Alternative splicing; Signal.
 FT SIGNAL 1 22
 FT CHAIN 23 92 INSULIN-LIKE GROWTH FACTOR IA.
 FT DOMAIN 23 51 B.
 FT DOMAIN 52 63 C.
 FT DOMAIN 64 84 A.
 FT DOMAIN 85 92 D.
 FT PROPEP 93 127 E. PEPTIDE
 FT DISULFID 28 70 BY SIMILARITY.
 FT DISULFID 40 83 BY SIMILARITY.

FT DISULFID 69 74 BY SIMILARITY.
 SQ SEQUENCE 127 AA; 14120 MM; 10548BAC72DC2D7 CRC64;
 Query Match 94.8%; Score 365; DB 1; Length 127;
 Best Local Similarity 94.3%; Pred. No. 4.4e-38;
 Matches 66; Conservative 1; Mismatches 3; Indels 0; Gaps 0;
 QY 1 GPEITLCAELVDALQVCGDRGFYFNKPTGYGSSRRAPQTGVDECCFRSCDLRLLEMY 60
 DB 23 GPEITLCAELVDALQVCGDRGFYFNKPTGYGSSRRAPQTGVDECCFRSCDLRLLEMY 82
 QY 61 CAPLKPAKSA 70
 DB 83 CAPLKPTKAA 92

RESULT 15
 IGFB_MOUSE
 ID IGFB_MOUSE STANDARD; PRT; 133 AA.
 AC P05018;
 DT 13-AUG-1987 (Rel. 05, Created)
 DT 13-AUG-1987 (Rel. 05, Last sequence update)
 DT 15-MAR-2004 (Rel. 43, Last annotation update)
 DE Insulin-like growth factor IB precursor (IGF-IB) (Somatomedin).
 GN IGF1 OR IGF-1.
 OS Mus musculus (Mouse).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
 OX NCBI_TaxID=10090;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Liver;
 RX MEDLINE=87040760; PubMed=3774549;
 RA Bell G.I., Stempin M.M., Fong N.M., Rall L.B.;
 RT "Sequences of liver cDNAs encoding two different mouse insulin-like
 growth factor I precursors."
 RL Nucleic Acids Res. 14:7873-7882(1986).
 RN [2]

RP SEQUENCE FROM N.A.
 RC STRAIN=FVB/N; TISSUE=Liver;
 RC MEDLINE=22388257; PubMed=12477932;
 RA Strausberg R.L., Feingold E.A., Grouse L.H., Shenmen C.M., Schuler G.D.,
 RA Klausner R.D., Bustow K.H., Scheffer C.F., Bhat N.K.,
 RA Altschul S.F., Zeeberg B., Buettow K.H., Schmechel J., Wang J., Hsieh F.,
 RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hong L.,
 RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
 RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
 RA Brownstein M.J., Uedin T.B., Toshiyuki S., Carninci P., Prange C.,
 RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullany S.J.,
 RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
 RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
 RA Villalón D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
 RA Fahey J., Helton E., Kettman M., Madan A., Rodrigues S., Sanchez A.,
 RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
 RA Blakeley R.W., Touchman J.W., Green E.D., Dickson M.C.,
 RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
 RA Butcherfield Y.S.N., Krzywinski M.I., Skalska U., Smalios D.E.,
 RA Stenverch A., Schein J.E., Jones S.J.M., Marra M.A.;
 RT "Generation and initial analysis of more than 15,000 full-length
 human and mouse cDNA sequences."
 RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
 CC -!- FUNCTION: The insulin-like growth factors, isolated from plasma,
 CC are structurally and functionally related to insulin but have a
 CC much higher growth-promoting activity.
 CC -!- SUBCELLULAR LOCATION: Secreted.
 CC -!- ALTERNATIVE PRODUCTS:
 CC Event=Alternative splicing; Named isoforms=2;
 CC Name=IGF-IB;
 CC IsoId=P05018-1; Sequence=Displayed;
 CC Name=IGF-IA;
 CC IsoId=P05017-1; Sequence=External;
 CC -!- SIMILARITY: Belongs to the insulin family.

CC This SWISS-PROT entry is copyright. It is produced through a collaboration
 CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
 CC the European Bioinformatics Institute. There are no restrictions on use
 CC use by non-profit institutions as long as its content is in no way
 CC modified and this statement is not removed. Usage by and for commercial
 CC entities requires a license agreement (See http://www.isb-sib.ch/announce/
 CC or send an email to license@isb-sib.ch).

DR EMBL; X04482; CAA28170.1; -;
 DR HSPF; P01343; IGF1.
 DR MGD; MGI196432; IGF1.
 DR GO; GO:0010001; P:glial cell differentiation; IMP.
 DR GO; GO:0007399; P:neurogenesis; IMP.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin.
 DR PRINTS; PR00277; INSULIN.
 DR SMART; SM00078; ILGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 DR Insulin family; Growth factor; Plasma.
 KW Insulin family; Growth factor; Plasma; Alternative splicing; Signal.
 FT SIGNAL 1 22
 FT CHAIN 23 92 INSULIN-LIKE GROWTH FACTOR IB.
 FT DOMAIN 23 51 B.
 FT DOMAIN 52 63 C.
 FT DOMAIN 64 84 A.
 FT DOMAIN 85 92 D.
 FT PROPEP 93 133 E. PEPTIDE.
 FT DISULFID 28 70 BY SIMILARITY.
 FT DISULFID 40 83 BY SIMILARITY.
 FT DISULFID 69 74 BY SIMILARITY.
 SQ SEQUENCE 133 AA; 14915 MW; B8E5C05B886D62502 CRC64;

Query Match 94.8%; Score 365; DB 1; Length 133;
 Best Local Similarity 94.3%; Pred. No. 4.7e-38;
 Matches 66; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

QY 1 GPELTCGAEVLVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60
 DB 23 GPELTCGAEVLVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 82

QY 61 CAPLKPAKSA 70
 DB 83 CAPLKPAA 92

RESULT 16
 IGF1_COTVA STANDARD; PRT; 124 AA.
 AC P51462;
 DT 01-OCT-1996 (Rel. 34, Created)
 DT 01-OCT-1996 (Rel. 34, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Insulin-like growth factor I precursor (IGF-I) (Somatomedin) (Fragment).
 DE IGF1.
 OS Coturnix coturnix japonica (Japanese quail).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Archoosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
 OC Coturnix.
 OX NCBI_TaxID=93934;
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=95187621; PubMed=7891819;
 RA Kida S., Iwaki M., Nakamura A., Miura Y., Takenaka A., Takahashi S.,
 RA Neguchi T.;
 RT "Insulin-like growth factor-I messenger RNA content in the oviduct of
 RT Japanese quail (Coturnix coturnix japonica): changes during growth
 RT and development or after estrogen administration."
 RL Comp Biochem. Physiol. 109C:191-204(1994).
 CC -!- FUNCTION: the insulin-like growth factors, isolated from plasma,
 CC are structurally and functionally related to insulin but have a
 CC much higher growth-promoting activity.
 CC -!- SUBCELLULAR LOCATION: Secreted.

CC -!- SIMILARITY: Belongs to the insulin family.
 CC This SWISS-PROT entry is copyright. It is produced through a collaboration
 CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
 CC the European Bioinformatics Institute. There are no restrictions on use
 CC use by non-profit institutions as long as its content is in no way
 CC modified and this statement is not removed. Usage by and for commercial
 CC entities requires a license agreement (See http://www.isb-sib.ch/announce/
 CC or send an email to license@isb-sib.ch).

DR EMBL; S75247; -; NOT_ANNOTATED_CDS.
 DR HSPF; P01343; IGF1.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR PRINTS; PR00277; INSULIN.
 DR SMART; SM00078; ILGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 DR Insulin family; Growth factor; Plasma.
 KW Insulin family; Growth factor; Plasma.
 FT NON_TER 1 1
 FT PROPEP <1 19 POTENTIAL.
 FT CHAIN 20 89 INSULIN-LIKE GROWTH FACTOR I.
 FT DOMAIN 20 48 B.
 FT DOMAIN 49 60 C.
 FT DOMAIN 61 81 A.
 FT DOMAIN 82 89 D.
 FT PROPEP 90 124 E. PEPTIDE.
 FT DISULFID 25 67 BY SIMILARITY.
 FT DISULFID 37 80 BY SIMILARITY.
 FT DISULFID 66 71 BY SIMILARITY.
 SQ SEQUENCE 124 AA; 13888 MW; 52254EB1BA52C3B6 CRC64;

Query Match 89.4%; Score 344; DB 1; Length 124;
 Best Local Similarity 88.6%; Pred. No. 1.7e-35;
 Matches 62; Conservative 3; Mismatches 5; Indels 0; Gaps 0;

QY 1 GPELTCGAEVLVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60
 DB 20 GPELTCGAEVLVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 79

QY 61 CAPLKPAKSA 70
 DB 80 CAPLKPAA 89

RESULT 17
 IGF1_CHICK STANDARD; PRT; 153 AA.
 AC P18254;
 DT 01-NOV-1990 (Rel. 16, Created)
 DT 01-NOV-1990 (Rel. 16, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
 DE IGF1.
 OS Gallus gallus (Chicken).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Archoosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
 OC Gallus.
 OX NCBI_TaxID=9031;
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=90190648; PubMed=2628728;
 RA Kajimoto Y., Kotwein P.;
 RT "Structure and expression of a chicken insulin-like growth factor I
 RT precursor."
 RL Mol. Endocrinol. 3:1907-1913(1989).
 RN [2]
 RP SEQUENCE OF 1-21 FROM N.A.
 RX MEDLINE=91236750; PubMed=2033062;
 RA Rotwein P., Kajimoto Y.;
 RT "Structure of the chicken insulin-like growth factor I gene reveals
 RT conserved promoter elements."
 RL J. Biol. Chem. 266:9724-9731(1991).
 RN [3]

RP SEQUENCE OF 49-118.
 RX MEDLINE=91106695; PubMed=2272467;
 RA Ballard F.J., Johnson R.J., Owens P.C., Francis G.L., Upton F.M.,
 RA McMurtry J.P., Wallace J.C.;
 RT "Chicken insulin-like growth factor-I: amino acid sequence,
 RT radioimmunoassay, and plasma levels between strains and during
 RT growth.";
 RL Gen. Comp. Endocrinol. 79:459-468(1990).
 CC -!- FUNCTION: The insulin-like growth factors, isolated from plasma,
 CC are structurally and functionally related to insulin but have a
 CC much higher growth-promoting activity.
 CC -!- SUBCELLULAR LOCATION: Secreted.
 CC -!- SIMILARITY: Belongs to the insulin family.
 CC
 CC This SWISS-PROT entry is copyright. It is produced through a collaboration
 CC between the Swiss Institute of Bioinformatics and the EMBL outstation
 CC the European Bioinformatics Institute. There are no restrictions on its
 CC use by non-profit institutions as long as its content is in no way
 CC modified and this statement is not removed. Usage by and for commercial
 CC entities requires a license agreement (see <http://www.isb-sib.ch/announce/>
 CC or send an email to license@isb-sib.ch).
 CC
 DR EMBL; M32791; AAA4828.1; -;
 DR EMBL; M74176; AAA4829.1; -;
 DR PIR; A41399; A41399.
 DR HSSP; P01343; 1GF1.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR PRINTS; PR00277; INSULINB.
 DR SMART; SM00078; ILGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 KW Insulin family; Growth factor; Plasma; Signal.
 FT SIGNAL 1 ?
 FT PROPEP 2 48 INSULIN-LIKE GROWTH FACTOR I.
 FT CHAIN 49 118 B.
 FT DOMAIN 49 77 C.
 FT DOMAIN 78 89 A.
 FT DOMAIN 90 110 D.
 FT PROPEP 119 153 E PEPTIDE.
 FT DISULFID 54 96 BY SIMILARITY.
 FT DISULFID 66 109 BY SIMILARITY.
 FT DISULFID 95 100 BY SIMILARITY.
 SQ SEQUENCE 153 AA; 17267 MW; AAEL3FDEDI3EE2F8 CRC64;
 Query Match 89.4%; Score 344; DB 1; Length 153;
 Best Local Similarity 88.6%; Pred. No. 2.1e-35;
 Matches 62; Conservative 3; Mismatches 5; Indels 0; Gaps 0;
 Qy 1 GPETLCAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60
 Db 49 GPETLCAELVDALQFVCGDRGFYFNKPTGYGSSRRRLHHRHKGIVDECCFQSCDJRRLEY 108
 Qy 61 CAPLKPAKSA 70
 Db 109 CAPIKPKSA 118
 RESULT 18
 IGFI_XENLA STANDARD; PRT; 153 AA.
 AC P16501;
 DT 01-AUG-1990 (Rel. 15, Created)
 DT 01-AUG-1990 (Rel. 15, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
 OS Xenopus laevis (African clawed frog).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Amphibia; Batrachia; Anura; Mesobatrachia; Pipidae; Pipidae;
 OC Xenopodinae; Xenopus.
 OX NCBI_TaxID=8355;
 RN [1]
 RP SEQUENCE FROM N.A.

RX MEDLINE=90231335; PubMed=2330002;
 RA Kajimoto Y., Rotwein P.;
 RT "Evolution of insulin-like growth factor I (IGF-I): structure and
 RT expression of an IGF-I precursor from *Xenopus laevis*.";
 RL Mol. Endocrinol. 4:217-226(1990).
 CC -!- FUNCTION: The insulin-like growth factors, isolated from plasma,
 CC are structurally and functionally related to insulin but have a
 CC much higher growth-promoting activity.
 CC -!- SUBCELLULAR LOCATION: Secreted.
 CC -!- SIMILARITY: Belongs to the insulin family.
 CC
 CC This SWISS-PROT entry is copyright. It is produced through a collaboration
 CC between the Swiss Institute of Bioinformatics and the EMBL outstation
 CC the European Bioinformatics Institute. There are no restrictions on its
 CC use by non-profit institutions as long as its content is in no way
 CC modified and this statement is not removed. Usage by and for commercial
 CC entities requires a license agreement (see <http://www.isb-sib.ch/announce/>
 CC or send an email to license@isb-sib.ch).
 CC
 DR EMBL; M29857; AAA70330.1; -;
 DR PIR; A36079; A36079.
 DR HSSP; P01343; 1GF1.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR PRINTS; PR00277; INSULINB.
 DR SMART; SM00078; ILGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 KW Insulin family; Growth factor; Plasma; Signal.
 FT SIGNAL 1 ?
 FT PROPEP 2 48 INSULIN-LIKE GROWTH FACTOR I.
 FT CHAIN 49 118 B.
 FT DOMAIN 49 77 C.
 FT DOMAIN 78 89 A.
 FT DOMAIN 90 110 D.
 FT PROPEP 119 153 E PEPTIDE.
 FT DISULFID 54 96 BY SIMILARITY.
 FT DISULFID 66 109 BY SIMILARITY.
 FT DISULFID 95 100 BY SIMILARITY.
 SQ SEQUENCE 153 AA; 17349 MW; 720EDDAAL17AFCFBE CRC64;
 Query Match 86.8%; Score 334; DB 1; Length 153;
 Best Local Similarity 84.3%; Pred. No. 3.6e-34;
 Matches 59; Conservative 5; Mismatches 6; Indels 0; Gaps 0;
 Qy 1 GPETLCAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60
 Db 49 GPETLCAELVDALQFVCGDRGFYFNKPTGYGSSRRSHRHRHKGIVDECCFQSCDJRRLEY 108
 Qy 61 CAPLKPAKSA 70
 Db 109 CAPAKPAKSA 118
 RESULT 19
 IGFA_CYPEA STANDARD; PRT; 161 AA.
 AC Q90325;
 DT 01-NOV-1997 (Rel. 35, Created)
 DT 01-NOV-1997 (Rel. 35, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Insulin-like growth factor I, adult form precursor.
 OS *Cyprinus carpio* (Common carp).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Cypriniformes;
 OC Cyprinidae; Cyprinus.
 OX NCBI_TaxID=7962;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Liver;
 RA MEDLINE=97283739; PubMed=9137817;
 RA Hashimoto H., Mikawa S., Takayama E., Yokoyama Y., Toyohara H.,
 RA Sakaguchi M.;

RA Plietetskaya E.M.;
RT "Recombinant coho salmon insulin-like growth factor I. Expression in
Escherichia coli, purification and characterization.";
Eur. J. Biochem. 218:205-211(1993).
CC -!- FUNCTION: The insulin-like growth factors, isolated from plasma,
are structurally and functionally related to insulin but have a
much higher growth-promoting activity.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- SIMILARITY: Belongs to the insulin family.
CC
CC This SWISS-PROT entry is copyright. It is produced through a collaboration
between the Swiss Institute of Bioinformatics and the EMBL outstation
the European Bioinformatics Institute. There are no restrictions on its
use by non-profit institutions as long as its content is in no way
modified and this statement is not removed. Usage by and for commercial
entities requires a license agreement (See http://www.isb-sib.ch/announce/
or send an email to license@isb-sib.ch).
CC
CC EMBL; M32792; AAA49410.1; -
DR PIR; A41396; A41396.
DR HSSP; P01343; IGF1.
DR InterPro; IPR004825; Ins/IGF/relax.
DR PRINTS; PR00277; INSULINB.
DR SMART; PF00049; Insulin; 1.
DR SMART; SM00078; IIGF; 1.
DR PROSITE; PS00262; INSULIN; 1.
KW Insulin family; Growth factor; Plasma; Signal.
FT SIGNAL 1 ?
FT PROPEP 1 ?
FT CHAIN 45 114 INSULIN-LIKE GROWTH FACTOR I.
FT DOMAIN 45 73 B.
FT DOMAIN 74 85 C.
FT DOMAIN 74 85 D.
FT DOMAIN 86 106 A.
FT DOMAIN 107 114 E.
FT PROPEP 115 176 E PEPTIDE.
FT DISULFID 50 92 BY SIMILARITY.
FT DISULFID 62 105 BY SIMILARITY.
FT DISULFID 91 96 BY SIMILARITY.
SQ SEQUENCE 176 AA; 4AADCFCEADAD0894 CRC64;
Query Match 82.6%; Score 318; DB 1; Length 176;
Best Local Similarity 80.0%; Pred. No. 4e-32;
Matches 56; Conservative 7; Mismatches 7; Indels 0; Gaps 0;
OY 1 GPETLCGAEIVDALQVCGDRGFYFNKPTGVSRRAPQTGIVDCCFRSCDLRLEMY 60
Db 45 GPETLCGAEIVDTLQVCGERGFYFSKPTGYSRRSHNRGIVDECCFQSCELRLEMY 104
OY 61 CAPLKPAKSA 70
Db 105 CAPVKSCKAA 114
RESULT 22
ID IGF1_ONCMY STANDARD; PRT; 176 AA.
AC Q02815;
DT 01-FEB-1995 (Rel. 31, Created)
DT 01-FEB-1995 (Rel. 31, Last sequence update)
DT 10-OCT-2003 (Rel. 42, Last annotation update)
DE Insulin-like growth factor I precursor (IGF-I) (Somatomedin).
OS Oncorhynchus mykiss (Rainbow trout) (Salmo gairdneri).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Actinopterygii; Neopterygii; Teleostei; Euteleostei;
OC Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
OX NCBI_TaxID=8022;
RP SEQUENCE FROM N.A.
RC TISSUE=Liver;
RX MEDLINE=93028377; PubMed=1409585;
RA Shablott M.J., Chen T.T.;
RT "Identification of a second insulin-like growth factor in a fish
species.";

RL Proc. Natl. Acad. Sci. U.S.A. 89:8913-8917(1992).
CC -!- FUNCTION: The insulin-like growth factors, isolated from plasma,
are structurally and functionally related to insulin but have a
much higher growth-promoting activity.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- SIMILARITY: Belongs to the insulin family.
CC
CC This SWISS-PROT entry is copyright. It is produced through a collaboration
between the Swiss Institute of Bioinformatics and the EMBL outstation
the European Bioinformatics Institute. There are no restrictions on its
use by non-profit institutions as long as its content is in no way
modified and this statement is not removed. Usage by and for commercial
entities requires a license agreement (See http://www.isb-sib.ch/announce/
or send an email to license@isb-sib.ch).
CC
CC EMBL; M95183; AAA49412.1; -
DR PIR; A46244; A46244.
DR HSSP; P01343; IGF1.
DR InterPro; IPR004825; Ins/IGF/relax.
DR PRINTS; PF00049; Insulin; 1.
DR SMART; PR00277; INSULINB.
DR SMART; SM00078; IIGF; 1.
DR PROSITE; PS00262; INSULIN; 1.
KW Insulin family; Growth factor; Plasma; Signal.
FT SIGNAL 1 ?
FT PROPEP 1 ?
FT CHAIN 45 114 INSULIN-LIKE GROWTH FACTOR I.
FT DOMAIN 45 73 B.
FT DOMAIN 74 85 C.
FT DOMAIN 86 106 A.
FT DOMAIN 107 114 D.
FT PROPEP 115 176 E PEPTIDE.
FT DISULFID 50 92 BY SIMILARITY.
FT DISULFID 62 105 BY SIMILARITY.
FT DISULFID 91 96 BY SIMILARITY.
SQ SEQUENCE 176 AA; 19510 MW; DE86283D80DDAD06 CRC64;
Query Match 82.6%; Score 318; DB 1; Length 176;
Best Local Similarity 80.0%; Pred. No. 4e-32;
Matches 56; Conservative 7; Mismatches 7; Indels 0; Gaps 0;
OY 1 GPETLCGAEIVDALQVCGDRGFYFNKPTGVSRRAPQTGIVDCCFRSCDLRLEMY 60
Db 45 GPETLCGAEIVDTLQVCGERGFYFSKPTGYSRRSHNRGIVDECCFQSCELRLEMY 104
OY 61 CAPLKPAKSA 70
Db 105 CAPVKSCKAA 114
RESULT 23
ID IGF2_ONCMY STANDARD; PRT; 214 AA.
AC Q02816;
DT 01-FEB-1995 (Rel. 31, Created)
DT 01-FEB-1995 (Rel. 31, Last sequence update)
DT 10-OCT-2003 (Rel. 42, Last annotation update)
DE Insulin-like growth factor II precursor (IGF-II) (Erythrothropin).
OS Oncorhynchus mykiss (Rainbow trout) (Salmo gairdneri).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Actinopterygii; Neopterygii; Teleostei; Euteleostei;
OC Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
OX NCBI_TaxID=8022;
RP SEQUENCE FROM N.A.
RC TISSUE=Liver;
RX MEDLINE=93028377; PubMed=1409585;
RA Shablott M.J., Chen T.T.;
RT "Identification of a second insulin-like growth factor in a fish
species.";

CC much higher growth-promoting activity.
 CC -1- SUBCELLULAR LOCATION: Secreted.
 CC -1- SIMILARITY: Belongs to the insulin family.
 CC -----
 CC This SWISS-PROT entry is copyright. It is produced through a collaboration
 CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
 CC the European Bioinformatics Institute. There are no restrictions on its
 CC use by non-profit institutions as long as its content is in no way
 CC modified and this statement is not removed. Usage by and for commercial
 CC entities requires a license agreement (See http://www.isb-sib.ch/announce/
 CC or send an email to license@isb-sib.ch).
 CC -----

EMBL; M95184; AAA49411.1; -
 DR PIR; B46244; B46244
 DR HSSP; P01344; IGF2
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1
 DR PRINTS; PR00277; INSULINB.
 DR SMART; SM00078; IIGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 KW Insulin family; Growth factor; Plasma; Signal.
 FT SIGNAL 1 ?
 FT PROPEP 2 47 BY SIMILARITY
 FT CHAIN 48 117 INSULIN-LIKE GROWTH FACTOR II.
 FT DOMAIN 48 79 B.
 FT DOMAIN 80 90 C.
 FT DOMAIN 91 111 A.
 FT DOMAIN 112 117 D.
 FT PROPEP 118 214 E PEPTIDE.
 FT DISULFID 56 97 BY SIMILARITY.
 FT DISULFID 68 110 BY SIMILARITY.
 FT DISULFID 96 101 BY SIMILARITY.
 SQ SEQUENCE 214 AA; 24636 MW; FF8CCB173314C9FA CRC64;

Query Match 64.5%; Score 248.5; DB 1; Length 214;
 Best Local Similarity 73.1%; Pred. No. 1.9e-23;
 Matches 49; Conservative 5; Mismatches 10; Indels 3; Gaps 2;

QY 3 ETLCGAEVLVDFVCGDRGFYFNKPTGSGSSRRAPQGTIVDECCFRSCDLRLEMYCA 62
 DB 53 ETLCGAEVLVDFVCGDRGFYFNKPTGSGSSRRAPQGTIVDECCFRSCDLRLEMYCA 111
 QY 63 PLKPAKS 69
 DB 112 --KPAKS 116

RESULT 24
 IGF2_MUSVI STANDARD; PRT; 129 AA.
 AC P41694;
 DT 01-NOV-1995 (Rel. 32, Created)
 DT 01-NOV-1995 (Rel. 32, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Insulin-like growth factor II precursor (IGF-II) (Fragment).
 GN IGF2.
 OS Mustela vison (American mink).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Carnivora; Fissipedia; Mustelidae; Mustelinae;
 OC Mustela.
 OX NCBI_TaxID=9667;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Liver;
 RX MEDLINE=93307613; PubMed=7686523;
 RA Ekstrom T.J., Baacklin B.M., Lindqvist Y., Engstrom W.;
 RT "Insulin-like growth factor II in the mink (Mustela vison):
 RT determination of a cDNA nucleotide sequence and developmental
 RT regulation of its expression."
 RL Gen. Comp. Endocrinol. 90:243-250 (1993).
 CC -1- FUNCTION: The insulin-like growth factors possess growth-promoting
 CC activity. In vitro, they are potent mitogens for cultured cells.
 CC IGF-II is influenced by placental lactogen and may play a role in

CC fetal development.
 CC -1- SUBCELLULAR LOCATION: Secreted.
 CC -1- SIMILARITY: Belongs to the insulin family.
 CC -----
 CC This SWISS-PROT entry is copyright. It is produced through a collaboration
 CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
 CC the European Bioinformatics Institute. There are no restrictions on its
 CC use by non-profit institutions as long as its content is in no way
 CC modified and this statement is not removed. Usage by and for commercial
 CC entities requires a license agreement (See http://www.isb-sib.ch/announce/
 CC or send an email to license@isb-sib.ch).
 CC -----

EMBL; S63459; AAB27392.2; -
 DR HSSP; P01344; IGF2
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1
 DR PRINTS; PR00277; INSULINB.
 DR SMART; SM00078; IIGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 KW Insulin family; Mitogen; Growth factor; Signal.
 FT SIGNAL 1 24 BY SIMILARITY.
 FT CHAIN 25 92 INSULIN-LIKE GROWTH FACTOR II.
 FT DOMAIN 25 52 B.
 FT DOMAIN 53 65 C.
 FT DOMAIN 66 86 A.
 FT DOMAIN 87 92 D.
 FT PROPEP 93 >129 E PEPTIDE (BY SIMILARITY).
 FT DISULFID 33 72 BY SIMILARITY.
 FT DISULFID 45 85 BY SIMILARITY.
 FT DISULFID 71 76 BY SIMILARITY.
 FT NON_TER 129 129
 SQ SEQUENCE 129 AA; 14436 MW; FD06661DAFB473D0 CRC64;

Query Match 58.3%; Score 224.5; DB 1; Length 129;
 Best Local Similarity 67.2%; Pred. No. 1e-20;
 Matches 45; Conservative 3; Mismatches 14; Indels 5; Gaps 2;

QY 3 ETLCGAEVLVDFVCGDRGFYFNKPTGSGSSRRAPQGTIVDECCFRSCDLRLEMYCA 62
 DB 30 ETLCGAEVLVDFVCGDRGFYFNKPTGSGSSRRAPQGTIVDECCFRSCDLRLEMYCA 86
 QY 63 PLKPAKS 69
 DB 87 --TPAKS 91

RESULT 25
 IGF2_CAVPO STANDARD; PRT; 128 AA.
 AC Q08279;
 DT 01-FEB-1995 (Rel. 31, Created)
 DT 01-FEB-1995 (Rel. 31, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Insulin-like growth factor II precursor (IGF-II) (Somatomedin A)
 DE (Fragment).
 GN IGF2.
 OS Cavia porcellus (Guinea pig).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Hystricognathi; Caviidae; Cavia.
 OX NCBI_TaxID=10141;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN=Hartley; TISSUE=Liver;
 RX MEDLINE=93246007; PubMed=1301379;
 RA Levinovitz A., Norstedt G., van den Berg S., Robinson I.C.A.F.,
 RA Ekstrom T.J.;
 RT "Isolation of an insulin-like growth factor II cDNA from guinea pig
 RT liver: expression and developmental regulation."
 RL Mol. Cell. Endocrinol. 89:105-110 (1992).
 CC -1- FUNCTION: The insulin-like growth factors possess growth-promoting
 CC activity. In vitro, they are potent mitogens for cultured cells.
 CC IGF-II is influenced by placental lactogen and may play a role in
 CC fetal development.

RA Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
 RT "Generation and initial analysis of more than 15,000 full-length
 human and mouse cDNA sequences."
 RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903 (2002).
 RN [11]
 RP SEQUENCE OF 103-180 FROM N.A.
 RX MEDLINE=89000779; PubMed=3167054;
 RA de Pagter-Holthuisen P., van der Kammen R.A., Jansen M.,
 van Schaik F.M.A., Sussenbach J.S.;
 RT "Differential expression of the human insulin-like growth factor II
 gene. Characterization of the IGF-II mRNAs and an mRNA encoding a
 putative IGF-II-associated protein."
 RL Biochim. Biophys. Acta 950:282-295(1988).
 RN [12]
 RP SEQUENCE OF 1-161 FROM N.A. (ISOFORM 2).
 RX MEDLINE=89005137; PubMed=3653397;
 RA le Bouc Y., Noguez P., Sondermeijer P., Dreyer D., Girard F.,
 Binoux M.;
 RT "A new 5'-non-coding region for human placental insulin-like growth
 factor II mRNA expression."
 RL FEBS Lett. 222:181-185(1987).
 RN [13]
 RP SEQUENCE OF 1-52 FROM N.A.
 RC TISSUE=Liver;
 RX MEDLINE=88003966; PubMed=3652904;
 RA Gray A., Tam A.W., Dull T.J., Hayflick J., Pintar J., Cavenee W.K.,
 Koufos A., Ullrich A.;
 RT "Tissue-specific and developmentally regulated transcription of the
 insulin-like growth factor 2 gene."
 RL DNA 6:283-295(1987).
 RN [14]
 RP SEQUENCE OF 25-91.
 RX MEDLINE=78191259; PubMed=658418;
 RA Rinderknecht E., Humbel R.E.;
 RT "Primary structure of human insulin-like growth factor II."
 RL FEBS Lett. 89:283-286(1978).
 RN [15]
 RP PARTIAL SEQUENCE, AND DISULFIDE BONDS.
 RX MEDLINE=89255428; PubMed=2722836;
 RA Smith M.C., Cook J.A., Furman T.C., Occolowitz J.L.;
 RT "Structure and activity dependence of recombinant human insulin-like
 growth factor II on disulfide bond pairing."
 RL J. Biol. Chem. 264:9314-9321(1989).
 RN [16]
 RP SEQUENCE OF 25-68.
 RX MEDLINE=95360205; PubMed=7633596;
 RA De Ceuninck F., Willeput J., Corvol M.;
 RT "Purification and characterization of insulin-like growth factor II
 (IGF II) and an IGF II variant from human placenta."
 RL J. Chromatogr. B 666:203-214(1995).
 RN [17]
 RP CARBOHYDRATE-LINKAGE SITE THR-99.
 RX MEDLINE=92235026; PubMed=1569071;
 RA Hudgins W.R., Hampton B., Burgess W.H., Ferdue J.F.;
 RT "The identification of O-glycosylated precursors of insulin-like
 growth factor II."
 RL J. Biol. Chem. 267:8153-8160(1992).
 RN [18]
 RP 3D-STRUCTURE MODELING.
 RX MEDLINE=83210259; PubMed=6189745;
 RA Blundell T.L., Bedarck S., Humbel R.E.;
 RT "Tertiary structures, receptor binding, and antigenicity of
 insulinlike growth factors."
 RL Fed. Proc. 42:2592-2597(1983).
 RN [19]
 RP STRUCTURE BY NMR.
 RX MEDLINE=95080243; PubMed=7527339;
 RA Terasawa H., Kohda D., Hatanaka H., Nagata K., Higashihashi N.,
 Fujiwara H., Sakano K.-I., Inagaki F.;
 RT "Solution structure of human insulin-like growth factor II;
 recognition sites for receptors and binding proteins."
 RL EMBO J. 13:5590-5597(1994).
 CC -I- FUNCTION: The insulin-like growth factors possess growth-promoting

CC activity. In vitro, they are potent mitogens for cultured cells.
 CC IGF-II is influenced by placental lactogen and may play a role in
 CC fetal development.
 CC -I- SUBCELLULAR LOCATION: Secreted.
 CC -I- ALTERNATIVE PRODUCTS:
 CC Event=Alternative splicing; Named isoforms=2;
 CC Name=1;
 CC IsoID=P01344-1; Sequence=Displayed;
 CC Name=2;
 CC IsoID=P01344-2; Sequence=VSP_002708;
 CC -I- SIMILARITY: Belongs to the insulin family.
 CC This SWISS-PROT entry is copyright. It is produced through a collaboration
 CC between the Swiss Institute of Bioinformatics and the EMBL outstation
 CC at the European Bioinformatics Institute. There are no restrictions on its
 CC use by non-profit institutions as long as its content is in no way
 CC modified and this statement is not removed. Usage by and for commercial
 CC entities requires a license agreement (See http://www.isb-sib.ch/announce/
 CC or send an email to license@isb-sib.ch).
 CC -----
 CC EMBL; M14118; AAAS2535.1; .
 CC EMBL; M14116; AAAS2535.1; JOINED.
 CC EMBL; M14117; AAAS2535.1; JOINED.
 CC EMBL; X03562; CAA27249.1; .
 CC EMBL; X06159; CAA29516.1; .
 CC EMBL; X00910; CAA25426.1; .
 CC EMBL; X06160; CAA29517.1; .
 CC EMBL; J03242; AAAS2545.1; .
 CC EMBL; X07868; CAA30717.1; .
 CC EMBL; X03425; CAA27155.1; .
 CC EMBL; X03426; CAA27156.1; .
 CC -----
 CC Query Match 57.9%; Score 223; DB 1; Length 180;
 CC Best Local Similarity 68.7%; Pred. No. 2.2e-20;
 CC Matches 46; Conservative 4; Mismatches 11; Indels 6; Gaps 3;
 QY 3 ETLGAEIWDALQFVCGDRGFEVKNKPTGCGSSRRAPQTGIVDSCCFRSCDLRELMYCA 62
 Db 30 ETLGCGELVDLQFVCGDRGFFRNPAA--SRVSRRS--RGIVECCFRSCDLALLETYCA 85
 QY 63 PLKPAKS 69
 Db 86 --TPAKS 90
 RESULT 27
 IGF2_CHICK
 ID. IGF2_CHICK STANDARD; PRT; 66 AA.
 AC P33717;
 DT 01-FEB-1994 (Rel. 28, Created)
 DT 01-FEB-1994 (Rel. 28, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Insulin-like growth factor II (IGF-II).
 GN IGF2.
 OS Gallus gallus (Chicken).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
 OC Gallus
 OX NCBI_TaxID=9031;
 OX [1]
 RP SEQUENCE.
 RX MEDLINE=90132351; PubMed=1688912;
 RA Kallincos N.C., Wallace J.C., Francis G.L., Ballard F.J.;
 RT "Chemical and biological characterization of chicken insulin-like
 growth factor-II."
 RL J. Endocrinol. 124:89-97(1990).
 RN [2]
 RP SEQUENCE OF 1-35.
 RX MEDLINE=88244560; PubMed=3379351;
 RA Dawe S.R., Francis G.L., McNamara P.J., Wallace J.C., Ballard F.J.;
 RT "Purification, partial sequences and properties of chicken
 insulin-like growth factors."
 RL J. Endocrinol. 117:173-181(1988).
 CC

AC P10764;
 DT 01-JUL-1989 (Rel. 11, Created)
 DT 01-OCT-1989 (Rel. 12, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Insulin-like growth factor II precursor (IGF-II).
 GN IGF2.
 OS Ovis aries (Sheep).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovidae;
 OC Bovidae; Caprinae; Ovis.
 OX NCBI_TaxID=9940;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Liver;
 RX MEDLINE=89345107; PubMed=2762134;
 RA O'Mahoney J.V., Adams T.E.;
 RT "Nucleotide sequence of an ovine insulin-like growth factor-II cDNA.";
 RL Nucleic Acids Res. 17:5332-5392(1989).
 RN [2]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Liver;
 RX MEDLINE=90356421; PubMed=2388846;
 RA Brown W.M., Dziegielewska K.M., Foreman R.C., Saunders M.R.;
 RT "The nucleotide and deduced amino acid sequences of insulin-like
 growth factor II cDNAs from adult bovine and fetal sheep liver.";
 RL Nucleic Acids Res. 18:4614-4614(1990).
 RN [3]
 RP SEQUENCE FROM N.A.
 RC STRAIN=Coopworth; TISSUE=Liver;
 RX MEDLINE=93250051; PubMed=8485157;
 RA Demmer J., Hill D.F., Petersen G.B.;
 RT "Characterization of two sheep insulin-like growth factor II cDNAs
 with different 5' untranslated regions";
 RL Biochim. Biophys. Acta 1173:79-80(1993).
 RN [4]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Liver;
 RA Ohlsen S.M., Wong E.A.;
 RL Submitted (SEP-1990) to the EMBL/GenBank/DBJ databases.
 RN [5]
 RP SEQUENCE OF 25-91.
 RX MEDLINE=89136887; PubMed=2537174;
 RA Francis G.L., McNeil K.A., Wallace J.C., Ballard F.J., Owens P.C.;
 RT "Sheep insulin-like growth factors I and II: sequences, activities
 and assays.";
 RL Endocrinology 124:1173-1183(1989).
 RN [6]
 RP SEQUENCE OF 25-58.
 RX MEDLINE=89323215; PubMed=2752053;
 RA Hey A.W., Browne C.A., Simpson R.J., Thorburn G.D.;
 RT "Simultaneous isolation of insulin-like growth factors I and II from
 adult sheep serum.";
 RL Biochim. Biophys. Acta 997:27-35(1989).
 CC -1- FUNCTION: The insulin-like growth factors possess growth-promoting
 activity. In vitro, they are potent mitogens for cultured cells.
 CC IGF-II is influenced by placental lactogen and may play a role in
 fetal development.
 CC -1- SUBCELLULAR LOCATION: Secreted.
 CC -1- SIMILARITY: Belongs to the insulin family.
 CC -----
 CC This SWISS-PROT entry is copyright. It is produced through a collaboration
 between the Swiss Institute of Bioinformatics and the EMBL outstation.
 CC The European Bioinformatics Institute. There are no restrictions on its
 CC use by non-profit institutions as long as its content is in no way
 CC modified and this statement is not removed. Usage by and for commercial
 CC entities requires a license agreement (See <http://www.isb-sib.ch/announce/>
 CC or send an email to license@isb-sib.ch).
 CC -----
 CC EMBL; U00668; AAB60626.1;
 CC EMBL; U00666; AAB60626.1; JOINED.
 CC EMBL; U00667; AAB60626.1; JOINED.
 CC EMBL; X15248; CAA33324.1;
 CC EMBL; X53554; CAA37621.1;

DR EMBL; M89788; AAA31548.1;
 DR EMBL; M89789; AAA31549.1;
 DR EMBL; X55638; CAA39163.1;
 DR PIR; S04858; S04858.
 DR HSSP; P01344; IGF2.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; insulin; i.
 DR PRINTS; PRO0277; INSULIN.
 DR SMART; SM00078; IIGF; i.
 DR PROSITE; PS00262; INSULIN; i.
 KW Insulin family; Mitogen; Growth factor; Signal.
 FT SIGNAL 1 24
 FT CHAIN 25 91 INSULIN-LIKE GROWTH FACTOR II.
 FT DOMAIN 25 52 B.
 FT DOMAIN 53 64 A.
 FT DOMAIN 65 85 C.
 FT DOMAIN 86 91 D.
 FT PROPEP 92 179 E PEPTIDE.
 FT DISULFID 33 71 BY SIMILARITY.
 FT DISULFID 45 84 BY SIMILARITY.
 FT DISULFID 70 75 BY SIMILARITY.
 FT CONFLICT 46 47
 FT CONFLICT 179 AA; 19616 MW; 7B369AE57F2B4378 CRC64;
 SQ SEQUENCE 179 AA; 19616 MW; 7B369AE57F2B4378 CRC64;
 Query Match 57.7%; Score 222; DB 1; Length 179;
 Best Local Similarity 67.2%; Pred. No. 2.9e-20;
 Matches 45; Conservative 3; Mismatches 13; Indels 6; Gaps 2;
 QY 3 ETLCGAEIWDALQFVCGDRGTFYFNKPTGYSRRAPQTGIVDECCFRSCDLRLEMYCA 62
 DB 30 ETLCGGELVDTLQFVCGDRGFYFRRP-----SSRINRRSRGIVECCFRSCDLALLETYCA 85
 QY 63 PLKPAKS 69
 DB 86 --APAKS 90
 RESULT 30
 IGF2 MOUSE STANDARD; PRT; 180 AA.
 ID IGF2_MOUSE STANDARD; PRT; 180 AA.
 AC P09535;
 DT 01-MAR-1989 (Rel. 10, Created)
 DT 01-MAR-1989 (Rel. 10, Last sequence update)
 DT 15-MAR-2004 (Rel. 43, Last annotation update)
 DE Insulin-like growth factor II precursor (Multiplication stimulating
 DE polypeptide) (IGF-II).
 GN IGF2 OR IGF-2.
 OS Mus musculus (Mouse).
 OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
 OX NCBI_TaxID=10090;
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=87053171; PubMed=3780370;
 RA Stempien M.M., Fong N.M., Rall L.B., Bell G.I.;
 RT "Sequence of a placental cDNA encoding the mouse insulin-like growth
 RT factor II precursor.";
 RL DNA 5:357-361(1986).
 RN [2]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=91090843; PubMed=1702294;
 RA Rotwein P., Hall L.J.;
 RT "Evolution of insulin-like growth factor II: characterization of the
 RT mouse IGF-II gene and identification of two pseudo-exons.";
 RL DNA Cell Biol. 9:725-735(1990).
 RN [3]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=97191545; PubMed=9039503;
 RA Sasaki H., Shimozaki K., Zubair M., Aoki N., Katano N., Moore T.,
 RA Feil R., Constancia M., Reik W., Rotwein P.;
 RT "Nucleotide sequence of a 28-kb mouse genomic region comprising the
 RT imprinted Igf2 gene.";
 RL DNA Res. 3:331-335(1996).

RN SEQUENCE FROM N.A.
RC STRAIN=C57BL/6J; TISSUE=Embryo;
RX MEDLINE=23386257; PubMed=12477932;
RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G., Klusner R.D., Collins P.S., Wagner L., Schmen C.M., Schuler G.D., Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K., Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Heish F., Diachenko L., Maruska K., Farmer A.A., Rubin G.M., Hong L., Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E., Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C., Rana S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullaney S.J., Bak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H., Richards S., Worley K.C., Hale S.C., Garcia A.M., Gay L.J., Hulyk S.W., Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A., Fahey J., Helton E., Kettner M., Madan A., Rodriguez S., Sanchez A., Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G., Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C., Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.N., Krzywinski M.I., Skalska U., Small D.E., Scherch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT "Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences."
RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN [5]
RP SEQUENCE OF 1-52 FROM N.A.
RX MEDLINE=89160812; PubMed=2537977;
RA Tolleisen S.E., Sadow J.L., Rotwein P.;
RT "Coordinate expression of insulin-like growth factor II and its receptor during muscle differentiation."
RL Proc. Natl. Acad. Sci. U.S.A. 86:1543-1547(1989).
CC -!- FUNCTION: The insulin-like growth factors possess growth-promoting activity. In vitro they are potent mitogens for cultured cells.
CC IGF-II is influenced by placental lactogen and may play a role in fetal development.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- DEVELOPMENTAL STAGE: Low levels of expression during myoblast proliferation. Levels rise rapidly during myoblast differentiation and then decrease.
CC -!- SIMILARITY: Belongs to the insulin family.
CC
CC This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See <http://www.isb-sib.ch/announce/> or send an email to license@isb-sib.ch).
CC
CC EMBL; M14951; AAA37683.1; -
CC EMBL; M36332; AAA37926.1; -
CC EMBL; M36331; AAA37926.1; JOINED.
CC EMBL; U71085; AAC53516.1; -
CC EMBL; SC053489; AAH53489.1; -
CC EMBL; M24633; AAA37923.1; -
CC PIR; A24913; A24913.
CC HSSP; P01344; IGF2.
CC MGD; MGI:96434; Igf2.
CC GO; GO:009887; P:organogenesis; IMP.
CC InterPro; IPR004825; Ins/IGF/relax.
CC Pfam; PF00049; Insulin; 1.
CC PRINTS; PR00277; INSULINB.
CC SMART; SM00078; ILGF; 1.
CC PROSITE; PS00262; INSULIN; 1.
CC Insulin family; Mitogen; Growth factor; Signal.
CC SIGNAL 1 24
CC CHAIN 25 91 INSULIN-LIKE GROWTH FACTOR II.
CC DOMAIN 53 64 B.
CC DOMAIN 55 52 A.
CC DOMAIN 65 85 C.
CC DOMAIN 86 91 D.
CC PROPEP 92 180 E.
CC FT 92 180 BY SIMILARITY.
CC FT 33 71

FT DISULFID 45 84 BY SIMILARITY.
FT DISULFID 70 75 BY SIMILARITY.
SQ SEQUENCE 180 AA; 20030 MW; 01730F8856E6D7B CRC64;
Query Match 57.38; Score 220.5; DB 1; Length 180;
Best Local Similarity 65.7%; Pred. No. 4.4e-20;
Matches 46; Conservative 3; Mismatches 14; Indels 7; Gaps 3;
QY 1 GP-ETLGCALVDALQFVCGDRGFYKFKPTGYGSSRRRAPQTGIVDCCFRSCDLRRLM 59
Db 27 GPGETLGGELVDTLQFVCGDRGFYFRP-----SRANRRSRGIVECCFRSCDLALLET 82
QY 60 YCAELKPAKS 69
Db 83 YCA--TPAKS 90
RESULT 31
IGF2_HORSE STANDARD; PRT; 181 AA.
AC P51459; O18837;
DT 01-OCT-1996 (Rel. 34, Created)
DT 15-JUL-1998 (Rel. 36, Last sequence update)
DT 10-OCT-2003 (Rel. 42, Last annotation update)
DE Insulin-like growth factor II precursor (IGF-II) (Somatomedin A).
GN IGF2.
OS Equus caballus (Horse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Perissodactyla; Equidae; Equus.
OX NCBI_TaxID=9796;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=97398492; PubMed=9250862;
RA Raussepp T., Otte K., Rozell B., Chowdhary B.P.;
RT "Fish mapping of the IGF2 gene in horse and donkey-detection of RT homoeology with HSA11."
RL Mamm. Genome 8:569-572(1997).
RN [2]
RP SEQUENCE OF 25-117 FROM N.A.
RC TISSUE=Liver;
RX MEDLINE=95154655; PubMed=7851727;
RA Otte K., Engstrom W.;
RT "Insulin-like growth factor II in the horse: determination of a cDNA nucleotide sequence and expression in fetal and adult tissue."
RL Gen. Comp. Endocrinol. 96:270-275(1994).
CC -!- FUNCTION: The insulin-like growth factors possess growth-promoting activity. In vitro they are potent mitogens for cultured cells.
CC IGF-II is influenced by placental lactogen and may play a role in fetal development.
CC -!- SUBCELLULAR LOCATION: Secreted.
CC -!- SIMILARITY: Belongs to the insulin family.
CC
CC This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See <http://www.isb-sib.ch/announce/> or send an email to license@isb-sib.ch).
CC
CC EMBL; AF020599; AAC48807.1; -
CC EMBL; U11241; AAA73915.1; -
CC PIR; I53642; I53642.
CC HSSP; P01344; IGF2.
CC InterPro; IPR004825; Ins/IGF/relax.
CC Pfam; PF00049; Insulin; 1.
CC PRINTS; PR00277; INSULINB.
CC SMART; SM00078; ILGF; 1.
CC PROSITE; PS00262; INSULIN; 1.
CC Insulin family; Mitogen; Growth factor; Signal.
CC SIGNAL 1 24
CC CHAIN 25 91 INSULIN-LIKE GROWTH FACTOR II.
CC DOMAIN 25 52 B.

FT DOMAIN 53 64 C.
 FT DOMAIN 65 85 A.
 FT DOMAIN 86 91 D.
 FT PROPEP 92 181 E PEPTIDE.
 FT DISULFID 33 71 BY SIMILARITY.
 FT DISULFID 45 84 BY SIMILARITY.
 FT DISULFID 70 75 BY SIMILARITY.
 FT CONFLICT 111 111 V -> G (IN REF. 2).
 FT CONFLICT 113 113 L -> R (IN REF. 2).
 SQ SEQUENCE 181 AA; 20360 MW; B88F96951C97AA12 CRC64;

Query Match 57.1%; Score 220; DB 1; Length 181;
 Best Local Similarity 67.2%; Pred. No. 5.1e-20;
 Matches 45; Conservative 5; Mismatches 11; Indels 6; Gaps 3;

Oy 3 ETLCGAELVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRRLEMYCA 62
 |||||
 Db 30 ETLCGELVDLQVCGDRGFYFSRPA--SRINRS--RGIVECCFRSCLLALLETYCA 85
 |||||

Oy 63 PLKPAKS 69
 |||||
 Db 86 --TPAKS 90

RESULT 32
 IGF2_PIG STANDARD; PRT; 181 AA.
 AC P23695;
 DT 01-NOV-1991 (Rel. 20, Created)
 DT 01-FEB-1996 (Rel. 33, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Insulin-like growth factor II precursor (IGF-II).
 GN IGF2.
 OS Sus scrofa (Pig).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus.
 OX NCBI_TaxID=9823;
 RP SEQUENCE FROM N.A.
 RX MEDLINE=91057136; PubMed=2243790;
 RA Catchpole I.R., Engstrom W.;
 RT Nucleotide sequence of a porcine insulin-like growth factor II
 cDNA."
 RL Nucleic Acids Res. 18:6430-6430(1990).
 RN [2]
 RP SEQUENCE FROM N.A.
 RC STRAIN=Large white;
 RX MEDLINE=22135956; PubMed=12140686;
 RA Amarger V., Nguyen M., Laere A.S., Braunschweig M., Nezer C.,
 RT Georges M., Andersson L.;
 RT "Comparative sequence analysis of the INS-IGF2-H19 gene cluster in
 pig".
 RL Mamm. Genome 13:388-398 (2002).
 RN [3]
 RP SEQUENCE OF 25-91.
 RX MEDLINE=90039035; PubMed=2809477;
 RA Francis G.L., Owens P.C., McNeil K.A., Wallace J.C., Ballard F.J.;
 RT "Purification, amino acid sequences and assay cross-reactivities of
 porcine insulin-like growth factor-I and -II";
 RL J. Endocrinol. 122:681-687(1989).
 CC -!- FUNCTION: The insulin-like growth factors possess growth-promoting
 activity. In vitro, they are potent mitogens for cultured cells.
 CC IGF-II is influenced by placental lactogen and may play a role in
 fetal development.
 CC -!- SUBCELLULAR LOCATION: Secreted.
 CC -!- SIMILARITY: Belongs to the insulin family.
 CC -----
 CC This SWISS-PROT entry is copyright. It is produced through a collaboration
 CC between the Swiss Institute of Bioinformatics and the EMBL outstation -
 CC the European Bioinformatics Institute. There are no restrictions on its
 CC use by non-profit institutions as long as its content is in no way
 CC modified and this statement is not removed. Usage by and for commercial
 CC entities requires a license agreement (see <http://www.isb-sib.ch/announce/>)

or send an email to license@isb-sib.ch.
 CC EMBL; X56094; CAA39574.1; ..
 DR EMBL; AY044828; AAL69551.1; ..
 DR HSSP; P01344; IGF2.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR PRINTS; PR00277; INSULINE.
 DR SMART; SMO0078; IIGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 KW Insulin family; Mitogen; Growth factor; Signal.
 FT SIGNAL 1 24
 FT CHAIN 25 91 BY SIMILARITY.
 FT DOMAIN 25 52 INSULIN-LIKE GROWTH FACTOR II.
 FT DOMAIN 53 64 B.
 FT DOMAIN 65 85 C.
 FT DOMAIN 86 91 A.
 FT DOMAIN 92 181 D.
 FT PROPEP 92 181 E PEPTIDE.
 FT DISULFID 33 71 BY SIMILARITY.
 FT DISULFID 45 84 BY SIMILARITY.
 FT DISULFID 70 75 BY SIMILARITY.
 SQ SEQUENCE 181 AA; 20312 MW; 1816B935299B4E1 CRC64;

Query Match 57.1%; Score 220; DB 1; Length 181;
 Best Local Similarity 67.2%; Pred. No. 5.1e-20;
 Matches 45; Conservative 5; Mismatches 11; Indels 6; Gaps 3;

Oy 3 ETLCGAELVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRRLEMYCA 62
 |||||
 Db 30 ETLCGELVDLQVCGDRGFYFSRPA--SRVNRRS--RGIVECCFRSCLLALLETYCA 85
 |||||

Oy 63 PLKPAKS 69
 |||||
 Db 86 --TPAKS 90

RESULT 33
 IGF2_RAT STANDARD; PRT; 180 AA.
 AC P01346;
 DT 21-JUL-1986 (Rel. 01, Created)
 DT 20-MAR-1987 (Rel. 04, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Insulin-like growth factor II precursor (Multiplication stimulating
 polypeptide) (IGF-II) (Multiplication stimulating activity) (MSA).
 GN IGF2 OR IGF-2.
 OS Rattus norvegicus (Rat).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
 OX NCBI_TaxID=10116;
 RP SEQUENCE FROM N.A.
 RC STRAIN=BRL-3A;
 RX MEDLINE=84295593; PubMed=6382022;
 RA Dull T.J., Gray A., Hayflick J.S., Ullrich A.;
 RT "Insulin-like growth factor II precursor gene organization in
 relation to insulin gene family."
 RL Nature 310:777-781(1984).
 RN [2]
 RP SEQUENCE FROM N.A.
 RC STRAIN=Buffalo;
 RX MEDLINE=85215534; PubMed=3899836;
 RA Soares M.B., Ishii D.N., Efstratiadis A.;
 RT "Developmental and tissue-specific expression of a family of
 transcripts related to rat insulin-like growth factor II mRNA."
 RL Nucleic Acids Res. 13:1119-1134(1985).
 RN [3]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=8726166; PubMed=2438416;
 RA Soares M.B., Turken A., Ishii D.N., Mills L., Episkopou V., Cotter S.,
 RA Zeitlin S., Efstratiadis A.;
 RT "Rat insulin-like growth factor II gene. A single gene with two
 promoters expressing a multitranscript family.";

RL J. Mol. Biol. 192:737-752(1986).
 RN [4].
 RP SEQUENCE FROM N.A.
 RX MEDLINE=87057436; PubMed=3023383;
 RA Frunzio R., Chiariotti L., Brown A.L., Graham D.E., Rechler M.M.,
 Brunl C.B.;
 RA "Structure and expression of the rat insulin-like growth factor II
 (rIGF-II) gene. rIGF-II RNAs are transcribed from two promoters.";
 RT J. Biol. Chem. 261:17138-17149(1986).
 RL [5].
 RP SEQUENCE FROM N.A.
 RX MEDLINE=8900793; PubMed=3167060;
 RA Ueno T., Takahashi K., Matsuguchi T., Endo H., Yamamoto M.;
 RA "Transcriptional deviation of the rat insulin-like growth factor II
 gene initiated at three alternative leader-exons between neonatal
 tissues and ascites hepatomas.";
 RL Biochim. Biophys. Acta 950:411-419(1988).
 RN [6].
 RP SEQUENCE OF 52-180 FROM N.A.
 RX MEDLINE=85061532; PubMed=6390212;
 RA Whitfield H.J., Brunl C.B., Frunzio R., Terrell J.E.,
 Nissley S.P., Rechler M.M.;
 RA "Isolation of a cDNA clone encoding rat insulin-like growth factor-II
 precursor.";
 RT Nature 312:277-280(1984).
 RL [7].
 RP SEQUENCE OF 103-180 FROM N.A.
 RX MEDLINE=89127259; PubMed=3221878;
 RA Chiariotti L., Brown A.L., Frunzio R., Clemmons D.R., Rechler M.M.,
 Brunl C.B.;
 RA "Structure of the rat insulin-like growth factor II transcriptional
 unit; heterogeneous transcripts are generated from two promoters by
 use of multiple polyadenylation sites and differential ribonucleic
 acid splicing.";
 RL Mol. Endocrinol. 2:1115-1126(1988).
 RN [8].
 RP SEQUENCE OF 25-91.
 RX MEDLINE=81215670; PubMed=7016879;
 RA Marquardt H., Todaro G.J., Henderson L.E., Oroszlan S.;
 RA "Purification and primary structure of a polypeptide with
 multiplication-stimulating activity from rat liver cell cultures.
 RT Homology with human insulin-like growth factor II.";
 RL J. Biol. Chem. 256:6859-6865(1981).
 CC -!- FUNCTION: The insulin-like growth factors possess growth-promoting
 activity. In vitro, they are potent mitogens for cultured cells.
 CC IGF-II is influenced by placental lactogen and may play a role in
 fetal development.
 CC -!- SUBCELLULAR LOCATION: Secreted.
 CC -!- SIMILARITY: Belongs to the insulin family.
 CC -----
 CC This SWISS-PROT entry is copyright. It is produced through a collaboration
 between the Swiss Institute of Bioinformatics and the EMBL outstation
 at the European Bioinformatics Institute. There are no restrictions on its
 use by non-profit institutions as long as its content is in no way
 modified and this statement is not removed. Usage by and for commercial
 entities requires a license agreement (See <http://www.isb-sib.ch/announce/>
 or send an email to license@isb-sib.ch).
 CC -----
 DR EMBL; X00911; CRA25428.1; -
 DR EMBL; X00911; CRA25427.1; ALT_INIT.
 DR EMBL; X00911; CRA25429.1; ALT_INIT.
 DR EMBL; M13871; AAB95624.1; ALT_INIT.
 DR EMBL; M13869; AAB95624.1; JOINED.
 DR EMBL; M13870; AAB95624.1; JOINED.
 DR EMBL; M29880; AAA41391.1; -
 DR EMBL; M29879; AAA41391.1; JOINED.
 DR EMBL; X02213; CRA26136.1; -
 DR EMBL; X13101; CRA33493.1; -
 DR EMBL; X14833; CRA32942.1; -
 DR EMBL; X14834; CRA32943.1; -
 DR EMBL; M30273; AAA41432.1; -
 DR EMBL; M31221; AAA42046.1; -
 DR PIR; A25350; IGR2.

DR HSSP; P01344; IGF2.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR PRINTS; PR00277; INSULINB.
 DR SMART; SM00078; IIGF; 1.
 DR PROSITE; PS00262; INSULIN; 1.
 KW Insulin family; Mitogen; Growth factor; Signal.
 FT SIGNAL 1 24 INSULIN-LIKE GROWTH FACTOR II.
 FT CHAIN 25 91
 FT DOMAIN 25 52 B.
 FT DOMAIN 53 64 C.
 FT DOMAIN 65 85 A.
 FT DOMAIN 86 91 D.
 FT PROPEP 92 180 E PEPTIDE.
 FT DISULFID 33 71 BY SIMILARITY.
 FT DISULFID 45 84 BY SIMILARITY.
 FT DISULFID 70 75 BY SIMILARITY.
 FT CONFLICT 1 8 MISSING (IN REF. 2).
 FT CONFLICT 57 57 S->G (IN REF. 3).
 SQ SEQUENCE 180 AA; 20086 MW; AF12B4ECCDDBCC34 CRC64;

 Query Match 56.6%; Score 218; DB 1; Length 180;
 Best Local Similarity 65.7%; Pred. No. 9e-20;
 Matches 44; Conservative 3; Mismatches 14; Indels 6; Gaps 2;

 QY 3 ETLCCAEIYDALQFVCGDRGPFYFNKFTYGVSSRRAPQTVGVDECCFRSCDLRRLLEYCA 62
 DB 30 ETLCCGELVDTLQFVCGDRGFYFSRP-----SSRRARRSRGIVECCFRSCDLALLETYCA 85
 QY 63 PLKPKAS 69
 DB 86 --TPAKS 90

 RESULT 34
 IGF_MXGL STANDARD; PRT; 139 AA.
 ID IGF_MXGL
 AC 222618;
 DT 01-MAY-1991 (Rel. 18, Created)
 DT 01-MAY-1991 (Rel. 18, Last sequence update)
 DE 10-OCT-2003 (Rel. 42, Last annotation update)
 OS Insulin-like growth factor precursor (IGF) (fragment).
 OS Myxine glutinosa (Atlantic hagfish).
 OC Eukaryota; Metazoa; Chordata; Craniata; Hyperotreti; Myxiniiformes;
 OC Myxiniidae; Myxinae;
 OX NCBI_TaxID=7769;
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=91115860; PubMed=1989990;
 RA Nagamatsu S., Chan S.J., Falkmer S., Steiner D.F.;
 RA "Evolution of the insulin Gene superfamily. Sequence of a
 preproinsulin-like growth factor cDNA from the Atlantic hagfish.";
 RL J. Biol. Chem. 266:2337-2402(1991).
 CC -!- FUNCTION: The insulin-like growth factors, isolated from plasma,
 CC are structurally and functionally related to insulin but have a
 CC much higher growth-promoting activity.
 CC -!- SUBCELLULAR LOCATION: Secreted.
 CC -!- SIMILARITY: Belongs to the insulin family.
 CC -----
 CC This SWISS-PROT entry is copyright. It is produced through a collaboration
 between the Swiss Institute of Bioinformatics and the EMBL outstation
 at the European Bioinformatics Institute. There are no restrictions on its
 use by non-profit institutions as long as its content is in no way
 modified and this statement is not removed. Usage by and for commercial
 entities requires a license agreement (See <http://www.isb-sib.ch/announce/>
 or send an email to license@isb-sib.ch).
 CC -----
 DR EMBL; M57735; AAA9265.1; -
 DR PIR; A38612; A38612.
 DR HSSP; P01344; IGF2.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR Pfam; PF00049; Insulin; 1.
 DR PRINTS; PR00277; INSULINB.

DR SMART, SM00078; ILGF, 1.
 DR PROSITE, PS00262; INSULIN, 1.
 KW Insulin family; Mitogen; Growth factor; Signal.
 FT NON_TER 1
 FT SIGNAL 1
 FT CHAIN 39 139
 FT DOMAIN 39 67 B.
 FT DOMAIN 68 82 C.
 FT DOMAIN 83 103 A.
 FT DOMAIN 104 113 D.
 FT DOMAIN 114 139 E.
 SQ SEQUENCE 139 AA; 16087 MW; 2FC888C8D074FAC1 CRC64;

Query Match 53.6%; Score 206.5; DB 1; Length 139;
 Best Local Similarity 57.1%; Pred. No. 1.8e-18;
 Matches 40; Conservative 10; Mismatches 15; Indels 5; Gaps 2;
 QY 3 ETLCGAEIYDALQVCGDRGFYFNKPTGYSSRRAPQTGIVDECCFRSCDLRLEMYC 59
 Db 41 ETLCGSELVDTLQVCGDRGFYFNKPTGYSSRRAPQTGIVDECCFRSCDLRLEMYC 100

QY 60 YCAPLKPAAKS 69
 Db 101 YCA--RPSKA 108
 RESULT 35
 INS_MYOC
 ID INS_MYOC STANDARD; PRT; 50 AA.
 AC P07453;
 DT 01-APR-1988 (Rel. 07, Created)
 DT 01-APR-1988 (Rel. 07, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Insulin.
 GN INS.

OS Myoxocephalus scorpius (Shorthorn sculpin) (Daddy sculpin).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
 OC Acanthomorpha; Acanthopterygii; Percomorpha; Scorpaeniformes;
 OC Cottidae; Cottidae; Myoxocephalus.
 OX NCBI_TaxID=8097;
 RN [1]
 RP SEQUENCE.
 RX MEDLINE=86274667; PubMed=3525155;
 RA Cutfield J.P., Cutfield S.M., Carne A., Emdin S.O., Falkner S.;
 RT "the isolation, purification and amino-acid sequence of insulin from
 the teleost fish Cottus scorpius (daddy sculpin).";
 RL Eur. J. Biochem. 158:117-123(1986).
 CC -!- FUNCTION: Insulin decreases blood glucose concentration. It
 increases cell permeability to monosaccharides, amino acids and
 fatty acids. It accelerates glycolysis, the pentose phosphate
 cycle, and glycogen synthesis in liver.
 CC -!- SUBUNIT: Heterodimer of a B chain and an A chain linked by two
 disulfide bonds.
 CC -!- SUBCELLULAR LOCATION: Secreted.
 CC -!- SIMILARITY: Belongs to the insulin family.
 DR PIR; A25061; INPIS.
 DR HSSP; P01308; ILPH.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR PRINTS; PR00277; INSULINB.
 DR SMART; SM00078; ILGF, 1.
 DR PROSITE; PS00262; INSULIN, 1.
 KW Insulin family; Hormone; Glucose metabolism.
 FT CHAIN 1 29 INSULIN B CHAIN.
 FT NON CONS 29 30
 FT CHAIN 30 50 INSULIN A CHAIN.
 FT DISULFID 7 36 INTERCHAIN.
 FT DISULFID 19 49 INTERCHAIN.
 FT DISULFID 35 40
 SQ SEQUENCE 50 AA; 5682 MW; 0A600B9BEFE15827 CRC64;

Query Match 41.4%; Score 159.5; DB 1; Length 50;
 Best Local Similarity 48.3%; Pred. No. 3.8e-13;
 Matches 29; Conservative 7; Mismatches 11; Indels 13; Gaps 1;
 QY 2 PETLCGAEIYDALQVCGDRGFYFNKPTGYSSRRAPQTGIVDECCFRSCDLRLEMYC 61
 Db 4 PHLGSHLVLDALYLVCGDRGFYFNKPTGYSSRRAPQTGIVDECCFRSCDLRLEMYC 50

Matches 29; Conservative 8; Mismatches 10; Indels 13; Gaps 1;
 QY 2 PETLCGAEIYDALQVCGDRGFYFNKPTGYSSRRAPQTGIVDECCFRSCDLRLEMYC 61
 Db 3 PHLGSHLVLDALYLVCGDRGFYFNKPTGYSSRRAPQTGIVDECCFRSCDLRLEMYC 49

RESULT 36
 INS_GADCA
 ID INS_GADCA STANDARD; PRT; 51 AA.
 AC P01336;
 DT 21-JUL-1986 (Rel. 01, Created)
 DT 21-JUL-1986 (Rel. 01, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)
 DE Insulin.
 GN INS.
 OS Gadus callarias (Baltic cod).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
 OC Acanthomorpha; Paracanthopterygii; Gadiformes; Gadidae; Gadus.
 OX NCBI_TaxID=8053;
 RN [1]
 RP SEQUENCE.
 RX MEDLINE=69061739; PubMed=4881974;
 RA Reid K.B.M., Grant P.T., Youngson A.;
 RT "the sequence of amino acids in insulin isolated from islet tissue of
 the cod (Gadus callarias).";
 RL Biochem. J. 110:289-296(1968).
 RN [2]
 RP PARTIAL SEQUENCE.
 RX MEDLINE=68131535; PubMed=4866431;
 RA Grant P.T., Reid K.B.M.;
 RT "isolation and a partial amino acid sequence of insulin from the
 islet tissue of cod (Gadus callarias).";
 RL Biochem. J. 106:531-541(1968).
 CC -!- FUNCTION: Insulin decreases blood glucose concentration. It
 increases cell permeability to monosaccharides, amino acids and
 fatty acids. It accelerates glycolysis, the pentose phosphate
 cycle, and glycogen synthesis in liver.
 CC -!- SUBUNIT: Heterodimer of a B chain and an A chain linked by two
 disulfide bonds.
 CC -!- SUBCELLULAR LOCATION: Secreted.
 CC -!- SIMILARITY: Belongs to the insulin family.
 DR HSSP; P01308; ILPH.
 DR InterPro; IPR004825; Ins/IGF/relax.
 DR PRINTS; PR00277; INSULINB.
 DR SMART; SM00078; ILGF, 1.
 DR PROSITE; PS00262; INSULIN, 1.
 KW Insulin family; Hormone; Glucose metabolism.
 FT CHAIN 1 30 INSULIN B CHAIN.
 FT NON CONS 30 31
 FT CHAIN 31 51 INSULIN A CHAIN.
 FT DISULFID 8 37 INTERCHAIN.
 FT DISULFID 20 50 INTERCHAIN.
 FT DISULFID 36 41
 SQ SEQUENCE 51 AA; 5789 MW; A51FD0C5D483705A CRC64;

Query Match 41.2%; Score 158.5; DB 1; Length 51;
 Best Local Similarity 48.3%; Pred. No. 5.2e-13;
 Matches 29; Conservative 7; Mismatches 11; Indels 13; Gaps 1;
 QY 2 PETLCGAEIYDALQVCGDRGFYFNKPTGYSSRRAPQTGIVDECCFRSCDLRLEMYC 61
 Db 4 PHLGSHLVLDALYLVCGDRGFYFNKPTGYSSRRAPQTGIVDECCFRSCDLRLEMYC 50

RESULT 37
 INSI_BATSP
 ID INSI_BATSP STANDARD; PRT; 51 AA.
 AC P01337;
 DT 21-JUL-1986 (Rel. 01, Created)
 DT 21-JUL-1986 (Rel. 01, Last sequence update)
 DT 10-OCT-2003 (Rel. 42, Last annotation update)

GenCore version 5.1.6
Copyright (c) 1993 - 2004 Compugen Ltd.

protein - protein search, using sw model

on: February 25, 2004, 06:20:08 ; Search time 13.7956 Seconds
(without alignments)
488.083 Million cell updates/sec

US-10-066-009A-1
rfect score: 385
quence: 1 GPETLCGAEIVDALQFVCGD.....SCDLRRLRYMCAPLKPAKSA 70

oring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

arched: 283366 seqs, 96191526 residues
tal number of hits satisfying chosen parameters: 283366

num DB seq length: 0
ximum DB seq length: 2000000000

st-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

tabase : PIR 78 ; *
1: piri : *
2: piri2 : *
3: piri3 : *
4: piri4 : *

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

sult No.	Score	Match	Length	ID	Description
1	385	100.0	122	PN0622	insulin-like growt
2	385	100.0	137	IGGP1	insulin-like growt
3	385	100.0	137	A36552	insulin-like growt
4	385	100.0	153	IGHU1	insulin-like growt
5	385	100.0	153	IGBO1	insulin-like growt
6	385	100.0	153	S12825	insulin-like growt
7	385	100.0	195	IGHUIB	insulin-like growt
8	381	99.0	154	JC2483	insulin-like growt
9	377	97.9	138	S22878	insulin-like growt
10	377	97.9	154	A33390	insulin-like growt
11	368	95.6	153	B27804	insulin-like growt
12	368	95.6	159	A26859	insulin-like growt
13	368	95.6	181	A27804	insulin-like growt
14	365	94.8	127	A25540	insulin-like growt
15	350	90.9	127	B40312	insulin-like growt
16	350	90.9	133	A40312	insulin-like growt
17	344	89.4	153	A41399	insulin-like growt
18	334	86.8	153	A36079	insulin-like growt
19	318	82.6	149	D54702	insulin-like growt
20	318	82.6	155	C44012	insulin-like growt
21	318	82.6	161	C54270	insulin-like growt
22	318	82.6	176	A41396	insulin-like growt
23	318	82.6	176	A46244	insulin-like growt
24	318	82.6	188	B54270	insulin-like growt
25	318	82.6	188	B54270	insulin-like growt
26	278.5	72.3	126	S66485	insulin-like growt
27	248.5	64.5	214	B46244	insulin-like growt
28	245	63.6	193	A53697	insulin-like growt
29	223	57.9	128	I57871	insulin-like growt

```

30      223      57.9      180      1      IGHU2      insulin-like growt
31      222.5     57.8      187      2      T10897     insulin-like growt
32      222      57.7      155      1      IGB02     insulin-like growt
33      222      57.7      179      2      S04858     insulin-like growt
34      220.5     57.3      180      2      A24913     insulin-like growt
35      220      57.1      93       2      I53642     insulin-like growt
36      220      57.1      181      2      B60738     insulin-like growt
37      218      56.6      180      1      IGR72      insulin-like growt
38      217.5     56.5      183      2      S02423     insulin-like growt
39      211.5     54.9      193      2      I67610     insulin-like growt
40      206.5     53.6      139      2      A38612     insulin-like growt
41      199      51.9      66       2      A60740     insulin-like growt
42      199      51.7      210      2      S66484     insulin-like growt
43      159.5     41.4      50       1      INFIS      insulin - shorthor
44      158.5     41.2      51       1      INCD       insulin - cod (Gad
45      155.5     40.4      51       1      INTF1      insulin 1 - toadfi

```

ALIGNMENTS

RESULT 1

PN0622
insulin-like growth factor Ia precursor - dog (fragment)
C:Species: Canis lupus familiaris (Dog)
C>Date: 10-Mar-1994 #sequence_revision 10-Mar-1994 #text_change 07-May-1999
C:Accession: PN0622
R:Delafontaine, P.; Lou, H.; Harrison, D.G.; Bernstein, K.E.
Gene 130, 305-306, 1993
A:Title: Sequence of a cDNA encoding dog insulin-like growth factor I.
A:Reference number: PN0622; MUID:93366192; PMID:8359700
A:Accession: PN0622
A:Molecule type: mRNA
A:Residues: 1-122
C:Comment: This protein is a potent inducer of DNA synthesis in multiple cell types, act.

A:Gene: IGPIA
C:Superfamily: insulin
C:Keywords: growth factor
F:20-89/Product: insulin-like growth factor Ia (fragment) #status predicted <MAT>

```

Query Match      100.0%; Score 385; DB 2; Length 122;
Best Local Similarity 100.0%; Pred. No. 1.8e-37;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Oy 1 GPETLCGAEIVDALQFVCGDGRGFYFNKPTGYGSSRRAPQTVGIVDECCFRSCDLRRLRYM 60
    |||||
Db 20 GPETLCGAEIVDALQFVCGDGRGFYFNKPTGYGSSRRAPQTVGIVDECCFRSCDLRRLRYM 79
Oy 61 CAPLKPAKSA 70
Db 80 CAPLKPAKSA 89

```

RESULT 2

IGGP1
insulin-like growth factor I precursor - guinea pig
C:Species: Cavia porcellus (guinea pig)
C>Date: 30-Sep-1991 #sequence_revision 30-Sep-1991 #text_change 07-Nov-1997
C:Accession: S12719
R:Bell, G.F.; Stempien, M.M.; Fong, N.M.; Seino, S.
Nucleic Acids Res. 18, 4275, 1990
A:Title: Sequence of a cDNA encoding guinea pig IGF-I.
A:Reference number: S12719; MUID:90332447; PMID:2377480
A:Accession: S12719
A:Molecule type: mRNA
A:Residues: 1-137 <BEL>
A:Cross-references: EMBL:X52951
A:Note: it is uncertain whether Met-1 or Met-8 is the initiator
C:Superfamily: insulin
C:Keywords: glycoprotein; growth factor; plasma
F:1-32/Domain: signal sequence #status predicted <SIG>
F:33-102/Product: insulin-like growth factor I #status predicted <MAT>

3-61/Domain: insulin chain B-like #status predicted <CHB>
 2-73/Domain: insulin connecting C peptide-like #status predicted <CHC>
 4-94/Domain: insulin chain A-like #status predicted <CHA>
 5-102/Domain: D peptide #status predicted <CHD>
 03-137/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CHE>
 24/Binding site: carbohydrate (Asn) (covalent) #status predicted

Query Match 100.0%; Score 385; DB 1; Length 137;
 Best Local Similarity 100.0%; Pred. No. 2e-37;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

1 GPEFLCGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQGIYDECCFRSCDLRLRLMEY 60
 |||
 33 GPEFLCGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQGIYDECCFRSCDLRLRLMEY 92
 |||
 61 CAPLKPAKSA 70
 |||
 93 CAPLKPAKSA 102
 |||

SULT 3
 5552
 sulin-like growth factor la precursor - human
 Species: Homo sapiens (man)
 Date: 12-Apr-1991 #sequence_revision 12-Apr-1991 #text_change 16-Jul-1999
 Accession: A36552
 Tobin, G.; Yee, D.; Bruenner, N.; Rotwein, P.
 1. Endocrinol. 4, 1914-1920, 1990
 Title: A novel human insulin-like growth factor I messenger RNA is expressed in normal
 Reference number: A36552; MUID:91187000; PMID:2082190
 Accession: A36552
 Status: preliminary
 Molecule type: mRNA
 Residues: 1-137 <TOB>
 Cross-references: GB:M37484; MID:g184833; PIDN:AAA52789.1; PID:g184834
 Superfamily: insulin

Query Match 100.0%; Score 385; DB 2; Length 137;
 Best Local Similarity 100.0%; Pred. No. 2e-37;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

1 GPEFLCGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQGIYDECCFRSCDLRLRLMEY 60
 |||
 33 GPEFLCGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQGIYDECCFRSCDLRLRLMEY 92
 |||
 61 CAPLKPAKSA 70
 |||
 93 CAPLKPAKSA 102
 |||

RESULT 4
 GHUI
 nsulin-like growth factor I precursor, splice form A [validated] - human
 Alternate names: IGF-I long splice form precursor; IGF-IA; somatomedin C
 Species: Homo sapiens (man)
 Date: 24-Apr-1984 #sequence_revision 30-Jun-1987 #text_change 31-Dec-2000
 Accession: A25581; A23614; A93321; JT0571; A23622; A29226; A60483; S30519; A48960; 157
 Rotwein, P.; Pollock, K.M.; Dider, D.K.; Krivl, G.G.
 1. Biol. Chem. 261, 4828-4832, 1986
 Title: Organization and sequence of the human insulin-like growth factor I gene. Alter
 Reference number: A25581; MUID:86168194; PMID:2937782
 Accession: A25581
 Molecule type: DNA
 Residues: 1-153 <ROT>
 Cross-references: GB:M14156; MID:g183107; PIDN:AAA52538.1; PID:g183110
 FEBS Lett. 195, 179-184, 1986
 de Pagter-Holthuiszen, P.; van Schaik, F.M.A.; Verduijn, G.M.; van Ommen, G.J.B.; Bouma
 Title: Organization of the human genes for insulin-like growth factors I and II.
 Reference number: A91356; MUID:86108862; PMID:3002851
 Accession: A23614
 Molecule type: DNA
 Residues: 24-153 <DEP>
 Cross-references: GB:X03420; GB:X00362; MID:g33020; PIDN:CAA27152.1; PID:g33021; GB:X0

R.Jansen, M.; van Schaik, F.M.A.; Ricker, A.T.; Bullock, B.; Woods, D.E.; Gabbay, K.H.;
 Nature 306, 609-611, 1983
 Article: Sequence of cDNA encoding human insulin-like growth factor I precursor.
 Reference number: A93321; MUID:84068210; PMID:16358902
 Accession: A93321
 Molecule type: mRNA
 Residues: 1-153 <JAN>
 Cross-references: GB:X00173; MID:g33015; PIDN:CAA24998.1; PID:g33016
 Note: Met-24 is proposed as a likely initiator
 Steenbergh, P.H.; Koonen-Reemat, A.M.C.B.; Cleutjens, C.B.J.M.; Sussenbach, J.S.
 Biochem. Biophys. Res. Commun. 175, 507-514, 1991
 Title: Complete nucleotide sequence of the high molecular weight human IGF-I mRNA.
 Reference number: JT0571; MUID:91207342; PMID:2016498
 Accession: JT0571
 Molecule type: mRNA
 Residues: 1-153 <STE>
 Cross-references: EMBL:X57025; MID:g33007; PIDN:CAA40342.1; PID:g33008
 Le Bouc, Y.; Dreyer, D.; Jaeger, F.; Binoux, M.; Sondermeyer, P.
 FEBS Lett. 196, 108-112, 1986
 Title: Complete characterization of the human IGF-I nucleotide sequence isolated from
 Reference number: A23622; MUID:86108910; PMID:2935423
 Accession: A23622
 Molecule type: mRNA
 Residues: 1-153 <LEB>
 Cross-references: GB:M27544; MID:g184829; PIDN:AAA52787.1; PID:g306927
 Rinderknecht, E.; Humbel, R.E.
 J. Biol. Chem. 253, 2769-2776, 1978
 Title: The amino acid sequence of human insulin-like growth factor I and its structure
 Reference number: A92226; MUID:78130171; PMID:632300
 Accession: A92226
 Molecule type: protein
 Residues: 49-118 <RIN>
 Rikarey, K.P.; Marquardt, H.; Sirbasku, D.A.
 Blood 74, 1084-1092, 1989
 Title: Human platelet-derived mitogens. Identification of insulinlike growth factors I
 Reference number: A60483; MUID:89323462; PMID:2752153
 Accession: A60483
 Molecule type: protein
 Residues: 48-53 'X', 55-65 'X', 67-75 <KAR>
 Experimental source: Platelet lysate
 Nordqvist Sandberg, A.C.; Stahlbom, P.A.; Lake, M.; Sara, V.R.
 Submitted to the EMBL data Library, November 1990
 Description: Nucleotide sequence of the human fetal brain IGF-Ia.
 Reference number: S30519
 Accession: S30519
 Status: preliminary
 Molecule type: mRNA
 Residues: 1-153 <NOR>
 Cross-references: EMBL:X56773; MID:g32989; PIDN:CAA40092.1; PID:g32990
 Sandberg-Nordqvist, A.C.; Stahlbom, P.A.; Reinecke, M.; Collins, V.P.; von Holst, H.;
 Cancer Res. 53, 2475-2478, 1993
 Title: Characterization of insulin-like growth factor 1 in human primary brain tumors.
 Reference number: A48960; MUID:93265440; PMID:8495408
 Accession: A48960
 Molecule type: mRNA
 Residues: 1-123, 'E', 125-132, 'E', 134-153 <GAN>
 Cross-references: GB:X56773; GB:S61841; MID:g32989
 Experimental source: anaplastic oligodendroglioma
 Note: sequence extracted from NCI Backbones (NCBIN:133056, NCBIP:133057)
 Note: sequence inconsistent with the nucleotide translation
 Rall, L.B.; Scott, J.; Bell, G.I.
 Meth. Enzymol. 146, 239-248, 1987
 Title: Human insulin-like growth factor I and II messenger RNA: isolation of complemen
 Reference number: I57044; MUID:88065102; PMID:3683205
 Accession: I57044
 Status: preliminary; translated from GB/EMBL/DDBJ
 Molecule type: mRNA
 Residues: 24-153 <RAI>
 Cross-references: GB:M29644; MID:g183119; PIDN:AAA52543.1; PID:g183120
 Comment: The insulin-like growth factors, isolated from plasma, are structurally and f
 Genetics:
 Gene: GDB:IGF1

RESULT 7
 IGHULB
 Insulin-like growth factor I precursor, splice form B [validated] - human
 N:Alternate names: IGF-IB; somatomedin C
 N:Contains: insulin-like growth factor IB-E1 amide
 C:Species: Homo sapiens (man)
 C:Date: 30-Jun-1987 #sequence_revision 30-Jun-1987 #text_change 31-Dec-2000
 C:Accession: A01611; A26181; S30540; B48960; A42664
 R:Rotwein, P.; Follock, K.M.; Dichter, D.K.; Krivi, G.G.
 J. Biol. Chem. 261, 4828-4832, 1986
 A:Title: Organization and sequence of the human insulin-like growth factor I gene. Alter
 A:Reference number: A92581; MUID:86168194; PMID:2937782
 A:Accession: A01611
 A:Molecule type: DNA
 A:Residues: 1-195 <ROT>
 A:Cross-references: GB:M14155; NID:g183106; PIDN:AAAS2537.1; PID:g183109
 R:Rotwein, P.
 P:OC. Natl. Acad. Sci. U.S.A. 83, 77-81, 1986
 A:Title: Two insulin-like growth factor I messenger RNAs are expressed in human liver.
 A:Reference number: A26181; MUID:86094355; PMID:3455760
 A:Accession: A26181
 A:Molecule type: mRNA
 A:Residues: 1-195 <ROT2>
 A:Cross-references: GB:M11568; NID:g183111; PIDN:AAAS2539.1; PID:g183112
 A:Sandberg Nordqvist, A.C.; Stahlbom, P.A.; Lake, M.; Sara, V.R.
 submitted to the EMBL Data Library, November 1990
 A:Description: Nucleotide sequence of the human fetal brain IGF-1b.
 A:Reference number: S30540
 A:Accession: S30540
 A:Molecule type: mRNA
 A:Residues: 1-195 <SAN>
 A:Cross-references: EMBL:X56774; NID:g32991; PIDN:CAA40093.1; PID:g32992
 A:Sandberg Nordqvist, A.C.; Stahlbom, P.A.; Reinecke, M.; Collins, V.P.; von Holst, H.;
 Jancsar Res. 53, 2475-2478, 1993
 A:Title: Characterization of insulin-like growth factor 1 in human primary brain tumors.
 A:Reference number: A48960; MUID:93265440; PMID:8495408
 A:Accession: B48960
 A:Molecule type: mRNA
 A:Residues: 1-195 <SA2>
 A:Cross-references: GB:X56774; GB:S61860; NID:g32991; PIDN:CAA40093.1; PID:g32992
 A:Experimental source: anaplastic oligodendroglioma
 A:Note: sequence modified after extraction from NCBI backbone
 A:Note: the authors translated the codon CAG for residues 124 and 133 as Glu
 A:Note: sequence extracted from NCBI backbone (NCBIN:133058)
 A:Siegfried, J.M.; Kasprzyk, P.G.; Treston, A.M.; Mulshtine, J.L.; Quinn, K.A.; Cuttitta,
 Proc. Natl. Acad. Sci. U.S.A. 89, 8107-8111, 1992
 A:Title: A mitogenic peptide amide encoded within the E peptide domain of the insulin-li
 A:Reference number: A42664; MUID:92390398; PMID:1325646
 A:Contents: annotation; IBE-1; amidated carboxyl end
 A:Comment: For an alternative splice form, see PIR:IGHUL.
 C:Genetics:
 A:Gene: GDB:IGF1
 A:Cross-references: GDB:120081; OMIM:147440
 A:Map position: 12q22-12q24.1
 A:Introns: 21/3; 74/1; 134/3
 A:Superfamily: insulin
 C:Keywords: alternative splicing; amidated carboxyl end; growth factor; plasma
 F:1-21/Domain: signal sequence #status predicted <SIG>
 F:22-48/Domain: propeptide #status predicted <PRO>
 F:49-118/Domain: insulin-like growth factor I #status predicted <MAT>
 F:49-77/Domain: insulin chain B-like #status predicted <CHB>
 F:78-89/Domain: insulin connecting C peptide-like #status predicted <CHC>
 F:90-110/Domain: insulin chain A-like #status predicted <CHA>
 F:111-118/Domain: D peptide #status predicted <CHD>
 F:119-195/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CHE>
 F:151-172/Product: insulin-like growth factor IB-E1 amide #status predicted <WA2>
 F:54-96.66-109.95-100/Disulfide bonds: #status predicted
 F:172/Modified site: amidated carboxyl end (Arg) (amide in mature form from following gl

QY 1 GPETLCAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQPTGIVDECCFRSCDLRLRLEMY 60
 |||||
 DB 49 GPETLCAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQPTGIVDECCFRSCDLRLRLEMY 108
 |||||
 QY 61 CAPLKPAKSA 70
 |||||
 DB 109 CAPLKPAKSA 118
 |||||
 RESULT 8
 JC2483
 Insulin-like growth factor-I precursor - goat
 C:Species: Capra aegagrus hircus (domestic goat)
 C:Date: 16-Mar-1995 #sequence_revision 26-May-1995 #text_change 17-Mar-1999
 C:Accession: JC2483
 R:Yokawa, S.; Yoshikawa, G.; Aoki, H.; Yamano, Y.; Sakai, H.; Komano, T.
 Biosci. Biotechnol. Biochem. 59, 87-92, 1995
 A:Title: Dynamic aspects in the expression of the goat insulin-like growth factor-I (IGF
 A:Reference number: JC2483; MUID:95201385; PMID:7765981
 A:Accession: JC2483
 A:Molecule type: mRNA
 A:Residues: 1-154 <MTK>
 A:Cross-references: GB:S11378; DBJ:D26116; DBJ:D26117; DBJ:D26118; DBJ:D26119
 C:Genetics:
 A:Introns: 21/3; 75/1; 135/3
 C:Superfamily: insulin
 F:1-49/Domain: signal sequence #status predicted <SIG>
 F:50-119/Product: insulin-like growth factor-I #status predicted <MAT>
 F:120-154/Region: E domain
 Query Match 99.0%; Score 381; DB 2; Length 154;
 Best Local Similarity 98.6%; Pred. No. 6.6e-37;
 Matches 69; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 GPETLCAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQPTGIVDECCFRSCDLRLRLEMY 60
 |||||
 DB 50 GPETLCAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQPTGIVDECCFRSCDLRLRLEMY 109
 |||||
 QY 61 CAPLKPAKSA 70
 |||||
 DB 110 CAPLKPAKSA 119
 |||||
 RESULT 9
 S22878
 Insulin-like growth factor I precursor, splice form 2 - sheep
 C:Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep)
 C:Date: 23-Apr-1999 #sequence_revision 23-Apr-1999 #text_change 23-Jul-1999
 C:Accession: S22878; S07198
 R:Dickson, M.C.; Saunders, J.C.; Gilmour, R.S.
 J. Mol. Endocrinol. 6, 17-31, 1991
 A:Title: The ovine insulin-like growth factor-I gene: characterization, expression and i
 A:Reference number: S22877; MUID:91197361; PMID:2015053
 A:Accession: S22878
 A:Status: preliminary
 A:Molecule type: DNA
 A:Residues: 1-138 <DIC>
 A:Cross-references: EMBL:X51358
 R:Francis, G.B.; McNeil, K.A.; Wallace, J.C.; Ballard, F.J.; Owens, P.C.
 Endocrinology 124, 1173-1183, 1989
 A:Title: Sheep insulin-like growth factors I and II: sequences, activities and assays.
 A:Reference number: S07198; MUID:89136887; PMID:2537174
 A:Accession: S07198
 A:Molecule type: protein
 A:Residues: 34-103 <FRA>
 A:Experimental source: fetal plasma
 C:Genetics:
 A:Introns: 5/3; 59/1; 119/3
 C:Superfamily: insulin
 C:Keywords: alternative splicing; growth factor; plasma
 F:7-33/Domain: propeptide #status predicted <PRO>
 F:34-103/Product: insulin-like growth factor I (active) #status experimental <MAT>
 F:34-62/Domain: insulin chain B-like #status predicted <DOB>

F:63-74/Domain: insulin connecting peptide-like #status predicted <CHC>
 F:75-95/Domain: insulin chain A-like #status predicted <DOA>
 F:96-103/Domain: peptide D #status predicted <CHD>
 F:104-138/Domain: carboxyl-terminal propeptide (E, peptide) #status predicted <CTP>
 F:139-81,51-94,80-85/disulfide bonds: #status Predicted

Query Match 97.9%; Score 377; DB 2; Length 138;
 Best Local Similarity 98.6%; Pred. No. 1.7e-36;
 Matches 69; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 QY 1 GPETLCGAEIYDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLLEY 60
 |||||
 DB 34 GPETLCGAEIYDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLLEY 93
 QY 61 CAPLKPAKSA 70
 |||||
 DB 94 CAPLKPAKSA 103

RESULT 10
 A33390
 insuln-like growth factor I precursor, splice form 1 - sheep
 N:Alternate names: somatomedin C
 C:Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep)
 C>Date: 09-Mar-1990 #sequence revision 27-Feb-1997 #text_change 23-Jul-1999
 C:Accession: S22877; A33390; S07965; S07198
 R:Dickson, M.C.; Saunders, J.C.; Gilmour, R.S.
 J. Mol. Endocrinol. 6, 17-31, 1991
 A:Title: The ovine insulin-like growth factor-I gene: characterization, expression and
 A:Reference number: S22877; MUID:91197361; PMID:2015053
 A:Accession: S22877
 A:Molecule type: DNA
 A:Residues: 1-154 <DIC>
 A:Cross-references: EMBL:X51358
 R:Wong, E.A.; Ohlsen, S.M.; Godfredson, J.A.; Dean, D.M.; Wheaton, J.E.
 DNA 8, 649-657, 1989
 A:Title: Cloning of ovine insulin-like growth factor-I cDNAs: heterogeneity in the mRNA
 A:Reference number: A33390; MUID:90126234; PMID:2575490
 A:Accession: A33390
 A:Molecule type: mRNA
 A:Residues: 1-43, 55, 46-154 <WON>
 A:Cross-references: GB:M30653; NID:9165929; PIDN:AAA80532.1; PID:9165930
 R:Hey, A.W.; Browne, C.A.; Simpson, R.J.; Thorburn, G.D.
 Biochim. Biophys. Acta 997, 27-35, 1989
 A:Title: Simultaneous isolation of insulin-like growth factors I and II from adult sheep
 A:Reference number: S04972; MUID:89323215; PMID:2752053
 A:Accession: S07965
 A:Molecule type: protein
 A:Residues: 50-79 <HEY>
 R:Francis, G.L.; McNeil, K.A.; Wallace, J.C.; Ballard, F.J.; Owens, P.C.
 Endocrinology 124, 1173-1183, 1989
 A:Title: Sheep insulin-like growth factors I and II: sequences, activities and assays.
 A:Reference number: S07198; MUID:89136887; PMID:2537174
 A:Accession: S07198
 A:Molecule type: protein
 A:Residues: 50-119 <FRA>
 A:Experimental source: fetal plasma
 C:Genetics:
 A:Introns: 21/3; 75/1; 135/3
 C:Superfamily: insulin
 C:Keywords: alternative splicing; growth factor; plasma
 F:1-2/Domain: signal sequence #status predicted <SIG>
 F:2-49/Domain: propeptide #status predicted <PRO>
 F:50-119/Product: insulin-like growth factor I (active) #status predicted <DOB>
 F:79-90/Domain: insulin chain B-like #status predicted <DOA>
 F:91-111/Domain: insulin connecting peptide-like #status predicted <CHD>
 F:112-119/Domain: peptide D #status predicted <CTP>
 F:120-154/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CTP>
 F:155-97,67-110,96-101/Disulfide bonds: #status predicted

Query Match 97.9%; Score 377; DB 2; Length 154;
 Best Local Similarity 98.6%; Pred. No. 1.9e-36;

Matches 69; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 QY 1 GPETLCGAEIYDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLLEY 60
 |||||
 DB 50 GPETLCGAEIYDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLLEY 109
 QY 61 CAPLKPAKSA 70
 |||||
 DB 110 CAPLKPAKSA 119

RESULT 11
 B27804
 insuln-like growth factor IA precursor - rat
 N:Alternate names: IGF-IA; somatomedin C
 C:Species: Rattus norvegicus (Norway rat)
 C>Date: 16-Mar-1989 #sequence revision 16-Mar-1989 #text_change 21-Jul-2000
 C:Accession: B27804; A27849; JH0133; A28504; JN0088; A32857; A61096
 R:Shimatsu, A.; Rotwein, P.
 J. Biol. Chem. 262, 7894-7900, 1987
 A:Title: Mosaic evolution of the insulin-like growth factors. Organization, sequence,
 A:Reference number: A27804; MUID:87222423; PMID:3034909
 A:Accession: B27804
 A:Molecule type: DNA
 A:Residues: 1-153 <SHI>
 A:Cross-references: GB:M15651; GB:J02743; NID:9204297; PIDN:AAA41215.1; PID:9204300
 R:Caella, S.J.; Smith, E.P.; Van Wyk, J.J.; Joseph, D.R.; Hynes, M.A.; Hoyt, E.C.; Lu
 DNA 6, 325-330, 1987
 A:Title: Isolation of rat testis cDNAs encoding an insulin-like growth factor I precu
 A:Reference number: A27849; MUID:88003970; PMID:3652906
 A:Accession: A27849
 A:Molecule type: mRNA
 A:Residues: 27-153 <CAS>
 A:Cross-references: GB:M17335; NID:9204751; PIDN:AAA41386.1; PID:9204752
 R:Kato, H.; Okoshi, A.; Miura, Y.; Noguchi, T.
 Agric. Biol. Chem. 54, 1599-1601, 1990
 A:Title: A new cDNA clone relating to larger molecular species of rat insulin-like gro
 A:Reference number: JH0133; MUID:91103966; PMID:1368571
 A:Accession: JH0133
 A:Molecule type: mRNA
 A:Residues: 27-153 <KAT>
 A:Cross-references: GB:D00698; NID:9220780; PIDN:AAA00604.1; PID:9220781
 A:Experimental source: liver
 R:Murphy, L.J.; Bell, G.I.; Duckworth, M.L.; Friesen, H.G.
 Endocrinology 121, 684-691, 1987
 A:Title: Identification, characterization, and regulation of a rat complementary deoxy
 A:Reference number: A28504; MUID:87246437; PMID:3595538
 A:Accession: A28504
 A:Molecule type: mRNA
 A:Residues: 46-153 <MUR>
 A:Cross-references: GB:M17714; NID:9204324; PIDN:AAA1227.1; PID:9204325
 R:Kato, H.; Takenaka, A.; Miura, Y.; Nishiyama, M.; Noguchi, T.
 Agric. Biol. Chem. 54, 2225-2230, 1990
 A:Title: Evidence of introduction by molecular cloning of artificial inverted sequence
 A:Reference number: JN0088; MUID:91136779; PMID:1368576
 A:Accession: JN0088
 A:Molecule type: mRNA
 A:Residues: 'MSAPP', 22-153 <KA2>
 A:Experimental source: liver
 A:Note: the authors present evidence that this mRNA may contain an artifactual inversi
 R:Tamura, K.; Kobayashi, M.; Ishii, Y.; Tamura, T.; Hashimoto, K.; Nakamura, S.; Niwa,
 J. Biol. Chem. 264, 5616-5621, 1989
 A:Title: Primary structure of rat insulin-like growth factor-I and its biological acti
 A:Reference number: A32857; MUID:89174609; PMID:2538424
 A:Accession: A32857
 A:Molecule type: protein
 R:Canalis, E.; McCarthy, T.; Centrella, M.
 Endocrinology 122, 22-27, 1988
 A:Title: Isolation and characterization of insulin-like growth factor I (somatomedin-C
 A:Reference number: A61096; MUID:8802445; PMID:335205
 A:Accession: A61096
 A:Molecule type: protein

RESULT 15
 B40912
 insulin-like growth factor I precursor form 2 - rat
 C:Species: Rattus norvegicus (Norway rat)
 C>Date: 28-Feb-1992 #sequence_revision 28-Feb-1992 #text_change 16-Jul-1999
 C:Accession: B40912
 R:Roberts Jr., C.T.; Laaky, S.R.; Lowe Jr., W.L.; Seaman, W.T.; LeRoith, D.
 Mol. Endocrinol. 1, 243-248, 1987
 A:Title: Molecular cloning of rat insulin-like growth factor I complementary deoxyribonu
 C tissues.
 A:Reference number: A40912; MUID:88288198; PMID:3453891
 A:Accession: B40912
 A:Status: preliminary
 A:Molecule type: mRNA
 A:Residues: 1-127 <ROB>
 A:Cross-references: GB:M15481; NID:G204753; PIDN:AAA41387.1; PID:G204754
 C:Superfamily: insulin

Query Match 90.9%; Score 350; DB 2; Length 127;
 Best Local Similarity 91.4%; Pred. No. 2.1e-33;
 Matches 64; Conservative 0; Mismatches 6; Indels 0; Gaps 0;

Qy 1 GPETLCGAEIVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLLEMY 60
 Db 23 GPETLCGAEIVDALQVCGDRGFYFNKPTGYGSSIRRAPQTGIVDECCFRSCDLRLLEMY 82
 Qy 61 CAPLKPAKSA 70
 Db 83 CVRCKPTKSA 92

RESULT 16
 A40912
 insulin-like growth factor I precursor form 1 - rat
 C:Species: Rattus norvegicus (Norway rat)
 C>Date: 28-Feb-1992 #sequence_revision 28-Feb-1992 #text_change 16-Jul-1999
 C:Accession: A40912
 R:Roberts Jr., C.T.; Laaky, S.R.; Lowe Jr., W.L.; Seaman, W.T.; LeRoith, D.
 Mol. Endocrinol. 1, 243-248, 1987
 A:Title: Molecular cloning of rat insulin-like growth factor I complementary deoxyribonu
 C tissues.
 A:Reference number: A40912; MUID:88288198; PMID:3453891
 A:Accession: A40912
 A:Status: preliminary
 A:Molecule type: mRNA
 A:Residues: 1-133 <ROB>
 A:Cross-references: GB:M15480; NID:G204749; PIDN:AAA41385.1; PID:G204750
 C:Superfamily: insulin

Query Match 90.9%; Score 350; DB 2; Length 133;
 Best Local Similarity 91.4%; Pred. No. 2.2e-33;
 Matches 64; Conservative 0; Mismatches 6; Indels 0; Gaps 0;

Qy 1 GPETLCGAEIVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLLEMY 60
 Db 23 GPETLCGAEIVDALQVCGDRGFYFNKPTGYGSSIRRAPQTGIVDECCFRSCDLRLLEMY 82
 Qy 61 CAPLKPAKSA 70
 Db 83 CVRCKPTKSA 92

RESULT 17
 A41399
 insulin-like growth factor IA precursor - chicken
 C:Species: Gallus gallus (chicken)
 C>Date: 03-Apr-1992 #sequence_revision 03-Apr-1992 #text_change 16-Jul-1999
 C:Accession: A41399; A61092; A40012; B60853; A37415
 R:Kajimoto, Y.; Rotwein, P.
 Mol. Endocrinol. 3, 1907-1913, 1989
 A:Title: Structure and expression of a chicken insulin-like growth factor I precursor.
 A:Reference number: A41399; MUID:90190648; PMID:2628728
 A:Accession: A41399

A:Molecule type: mRNA
 A:Residues: 1-153 <KAJ>
 A:Cross-references: GB:M32791; NID:G211950; PIDN:AAA48828.1; PID:G211951
 R:Fawcett, D.H.; Bulfield, G.
 J. Mol. Endocrinol. 4, 201-211, 1990
 A:Title: Molecular cloning, sequence analysis and expression of putative chicken insuli
 A:Reference number: A61092; MUID:190334699; PMID:2378674
 A:Accession: A61092
 A:Status: not compared with conceptual translation
 A:Molecule type: mRNA
 A:Residues: 1-153 <FAW>
 R:Kajimoto, Y.; Rotwein, P.
 J. Biol. Chem. 266, 9724-9731, 1991
 A:Title: Structure of the chicken insulin-like growth factor I gene reveals conserved f
 A:Reference number: A40012; MUID:191236750; PMID:2033062
 A:Accession: A40012
 A:Status: preliminary
 A:Molecule type: DNA
 A:Residues: 1-21 <KA2>
 A:Cross-references: GB:M74176; NID:G211952; PIDN:AAA48829.1; PID:G211953
 R:Dawe, S.R.; Francis, G.L.; McNamara, P.J.; Wallace, J.C.; Ballard, F.J.
 J. Endocrinol. 117, 173-181, 1988
 A:Title: Purification, partial sequences and properties of chicken insulin-like growth
 A:Reference number: A60853; MUID:88244560; PMID:3379351
 A:Accession: B60853
 A:Molecule type: protein
 A:Residues: 49-79 <DAM>
 R:Ballard, F.J.; Johnson, R.J.; Owens, P.C.; Francis, G.L.; Upton, F.M.; McMurtry, J.P.
 Gen. Comp. Endocrinol. 79, 459-468, 1990
 A:Title: Chicken insulin-like growth factor-I: amino acid sequence, radioimmunoassay, a
 A:Reference number: A37415; MUID:91106695; PMID:2272467
 A:Accession: A37415
 A:Status: preliminary
 A:Molecule type: protein
 A:Residues: 49-118 <BAL>
 C:Superfamily: insulin
 C:Keywords: growth factor
 F:49-77,90-110/Product: insulin-like growth factor IA #status experimental <MAT>
 F:49-77/Domain: insulin-like growth factor IA B chain #status predicted <CHB>
 F:78-89/Domain: insulin connecting C peptide-like #status experimental <CPE>
 F:90-110/Domain: insulin-like growth factor IA A chain #status experimental <CHA>
 E:111-118/Domain: D peptide #status experimental <MAA>
 F:119-153/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CTP>

Query Match 89.4%; Score 344; DB 2; Length 153;
 Best Local Similarity 88.6%; Pred. No. 1.3e-32;
 Matches 62; Conservative 3; Mismatches 5; Indels 0; Gaps 0;

Qy 1 GPETLCGAEIVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLLEMY 60
 Db 49 GPETLCGAEIVDALQVCGDRGFYFNKPTGYGSSRRLLHKGIVDECCFQSCDLRLLEMY 108
 Qy 61 CAPLKPAKSA 70
 Db 109 CAPLKPAKSA 118

RESULT 18
 A36079
 insulin-like growth factor I', precursor - African clawed frog
 C:Species: Xenopus laevis (African clawed frog)
 C>Date: 30-Nov-1990 #sequence_revision 30-Nov-1990 #text_change 16-Jul-1999
 C:Accession: A36079; B34049
 R:Kajimoto, Y.; Rotwein, P.
 Mol. Endocrinol. 4, 217-226, 1990
 A:Title: Evolution of insulin-like growth factor I (IGF-I): structure and expression of
 A:Reference number: A36079; MUID:90231335; PMID:2330002
 A:Accession: A36079
 A:Molecule type: mRNA
 A:Residues: 1-153 <KAJ>
 A:Cross-references: GB:M29857; NID:G214287; PIDN:AAA70330.1; PID:G214288
 R:Shuldiner, A.R.; Nirula, A.; Scott, L.A.; Roth, J.
 Biochem. Biophys. Res. Commun. 166, 223-230, 1990

A;Title: Evidence that Xenopus laevis contains two different nonallelic insulin-like genes
 A;Reference number: A90158; MUID:90147704; PMID:2302204
 A;Accession: B34049
 A;Molecule type: DNA
 A;Residues: 82-85, 'A', 87-125 <SH2>
 C;Genetics:
 A;Gene: IGF-1'
 C;Superfamily: insulin
 C;Keywords: growth factor

Query Match 86.8%; Score 334; DB 2; Length 153;
 Best Local Similarity 84.3%; Pred. No. 1.8e-31;
 Matches 59; Conservative 5; Mismatches 6; Indels 0; Gaps 0;
 QY 1 GPETLCGAEVLVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLRLRY 60
 |||||
 Db 49 GPETLCGAEVLVDLQVCGDRGFYFNKPTGYGSSRRSHRHRGIVDECCFCQSCDLRLRLRY 108
 |||||
 QY 61 CAPLKPAKSA 70
 |||||
 Db 109 CAPAKPAKSA 118
 |||||

RESULT 19
 D54270
 insulin-like growth factor-I precursor (clone OtIGFI-0) - chinook saalmon
 C;Species: Oncorhynchus tshawytscha (chinook salmon)
 C;Date: 13-Sep-1994 #sequence_revision 25-Apr-1997 #text_change 16-Jul-1999
 C;Accession: D54270
 R;Wallis, A.E.; Devlin, R.H.
 Mol. Endocrinol. 7, 409-422, 1993
 A;Title: Duplicate insulin-like growth factor-I genes in salmon display alternative splicing
 A;Reference number: A54270; MUID:93247592; PMID:7683374
 A;Accession: D54270
 A;Status: Preliminary
 A;Molecule type: mRNA
 A;Residues: 1-149 <WAL>
 A;Cross-references: GB:U15962; GB:S59515; NID:9559010; PIDN:AAA67268.1; PID:9559011
 A;Note: sequence extracted from NCBI backbone (NCBIN:130890, NCBIIP:130894)
 C;Superfamily: insulin

Query Match 82.6%; Score 318; DB 2; Length 149;
 Best Local Similarity 80.0%; Pred. No. 1.3e-29;
 Matches 56; Conservative 7; Mismatches 7; Indels 0; Gaps 0;
 QY 1 GPETLCGAEVLVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLRLRY 60
 |||||
 Db 45 GPETLCGAEVLVDLQVCGDRGFYFNKPTGYGSSRRSHRHRGIVDECCFCQSCDLRLRLRY 104
 |||||
 QY 61 CAPLKPAKSA 70
 |||||
 Db 105 CAPVKSCKAA 114
 |||||

RESULT 20
 C44012
 insulin-like growth factor I precursor, splice form 3 - coho salmon (fragment)
 N;Contains: insulin-like growth factor I, splice form 1; insulin-like growth factor I, splice form 2
 C;Species: Oncorhynchus kisutch (coho salmon)
 C;Date: 27-Apr-1993 #sequence_revision 27-Apr-1993 #text_change 16-Jul-1999
 C;Accession: C44012; A44012; B44012
 R;Duguay, S.J.; Park, L.K.; Samadpour, M.; Dickhoff, W.W.
 Mol. Endocrinol. 6, 1202-1210, 1992
 A;Title: Nucleotide sequence and tissue distribution of three insulin-like growth factor I genes
 A;Reference number: A44012; MUID:93024477; PMID:11406698
 A;Accession: C44012
 A;Status: preliminary
 A;Molecule type: mRNA
 A;Residues: 1-155 <DUG>
 A;Cross-references: GB:M81913; NID:g213442; PIDN:AAA49413.1; PID:g213443
 A;Note: sequence extracted from NCBI backbone (NCBIIP:115177)
 C;Genetics:
 A;Gene: IGF-I

C;Superfamily: insulin
 C;Keywords: growth factor

Query Match 82.6%; Score 318; DB 2; Length 155;
 Best Local Similarity 80.0%; Pred. No. 1.3e-29;
 Matches 56; Conservative 7; Mismatches 7; Indels 0; Gaps 0;
 QY 1 GPETLCGAEVLVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLRLRY 60
 |||||
 Db 19 GPETLCGAEVLVDLQVCGDRGFYFNKPTGYGSSRRSHRHRGIVDECCFCQSCDLRLRLRY 78
 |||||
 QY 61 CAPLKPAKSA 70
 |||||
 Db 79 CAPVKSCKAA 88
 |||||

RESULT 21
 C54270
 insulin-like growth factor-I precursor (clone OtIGFI-36) - chinook salmon
 C;Species: Oncorhynchus tshawytscha (chinook salmon)
 C;Date: 13-Sep-1994 #sequence_revision 25-Apr-1997 #text_change 16-Jul-1999
 C;Accession: C54270
 R;Wallis, A.E.; Devlin, R.H.
 Mol. Endocrinol. 7, 409-422, 1993
 A;Title: Duplicate insulin-like growth factor-I genes in salmon display alternative splicing
 A;Reference number: A54270; MUID:93247592; PMID:7683374
 A;Accession: C54270
 A;Status: Preliminary
 A;Molecule type: mRNA
 A;Residues: 1-161 <WAL>
 A;Cross-references: GB:U15961; GB:S59514; NID:9559008; PIDN:AAA67267.1; PID:9559009
 A;Note: sequence extracted from NCBI backbone (NCBIN:130889, NCBIIP:130893)
 C;Superfamily: insulin

Query Match 82.6%; Score 318; DB 2; Length 161;
 Best Local Similarity 80.0%; Pred. No. 1.4e-29;
 Matches 56; Conservative 7; Mismatches 7; Indels 0; Gaps 0;
 QY 1 GPETLCGAEVLVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLRLRY 60
 |||||
 Db 45 GPETLCGAEVLVDLQVCGDRGFYFNKPTGYGSSRRSHRHRGIVDECCFCQSCDLRLRLRY 104
 |||||
 QY 61 CAPLKPAKSA 70
 |||||
 Db 105 CAPVKSCKAA 114
 |||||

RESULT 22
 A41396
 insulin-like growth factor I precursor, splice form 2 - coho salmon
 N;Contains: insulin-like growth factor I, splice form 1
 C;Species: Oncorhynchus kisutch (coho salmon)
 C;Date: 03-Apr-1992 #sequence_revision 03-Apr-1992 #text_change 21-Jul-2000
 C;Accession: A41396; I51255; B44012; B44012
 R;Cao, Q.P.; Duguay, S.J.; Plietskaya, E.; Steiner, D.F.; Chan, S.J.
 Mol. Endocrinol. 3, 2005-2010, 1989
 A;Title: Nucleotide sequence and growth hormone-regulated expression of salmon insulin-1
 A;Reference number: A41396; MUID:90190659; PMID:2628735
 A;Accession: A41396
 A;Status: preliminary
 A;Molecule type: mRNA
 A;Residues: 1-176 <CAO>
 A;Cross-references: GB:W32792; NID:g213431; PIDN:AAA49410.1; PID:g213432
 R;Koval, A.; Kullik, V.; Duguay, S.; Plietskaya, E.; Adamo, M.L.; Roberts, C.T.
 DNA Cell Biol. 13, 1057-1062, 1994
 A;Title: Characterization of a salmon insulin-like growth factor I promoter.
 A;Reference number: I51255; MUID:95032736; PMID:7945938
 A;Accession: I51255
 A;Status: translated from GB/EMBL/DBJ
 A;Molecule type: DNA
 A;Residues: 1-5, 'F', 7-16 <KOV>
 A;Cross-references: GB:S74130; NID:g707007; PIDN:AA14148.1; PID:g4261848
 R;Duguay, S.J.; Park, L.K.; Samadpour, M.; Dickhoff, W.W.

Mo1. Endocrinol. 6, 1202-1210, 1992
 A;Title: Nucleotide sequence and tissue distribution of three insulin-like growth factor
 A;Reference number: A44012; MUID:93024477; PMID:1406698
 A;Accession: A44012
 A;Status: preliminary; not compared with conceptual translation
 A;Molecule type: mRNA
 A;Residues: 27-130,158-169 <DUG>
 A;Cross-references: GB:M81911; NID:9213438; PIDN:AAB59947.1; PID:g213439
 A;Note: sequence extracted from NCBI backbone (NCBIP:115183)
 A;Accession: B44012
 A;Status: preliminary; not compared with conceptual translation
 A;Molecule type: mRNA
 A;Residues: 27-169 <DUG>
 A;Cross-references: GB:M81912; NID:9213440; PIDN:AAB59948.1; PID:g213441
 A;Note: sequence extracted from NCBI backbone (NCBIP:115182)
 C;Genetics:
 A;Gene: IGF-I
 C;Superfamily: insulin
 C;Keywords: growth factor

Query Match 82.6%; Score 318; DB 2; Length 176;
 Best Local Similarity 80.0%; Pred. No. 1.5e-29;
 Matches 56; Conservative 7; Mismatches 7; Indels 0; Gaps 0;

QY 1 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTVGDECCFRSCDLRRLLEY 60
 |||||
 45 GPETLCGAEIYDVTLQFVCGERGFYFSKPTGYGSSRRHNRGIVDECCFQSCELRRLLEY 104

QY 61 CAPLKPAKSA 70
 |||||
 105 CAPVKSQKAA 114

Db

RESULT 23

A46244

insulin-like growth factor I precursor - rainbow trout
 C;Species: Oncorhynchus mykiss (rainbow trout)
 C;Date: 21-Sep-1993 #sequence_revision 18-Nov-1994 #text_change 16-Jul-1999
 R;Shambloett, M.J.; Chen, T.T.
 Proc. Natl. Acad. Sci. U.S.A. 89, 8913-8917, 1992
 A;Title: Identification of a second insulin-like growth factor in a fish species.
 A;Reference number: A46244; MUID:93028377; PMID:1409585
 A;Accession: A46244
 A;Status: preliminary
 A;Molecule type: nucleic acid
 A;Residues: 1-176 <SHA>
 A;Cross-references: GB:M95183; NID:9213435; PIDN:AAA49412.1; PID:g213436
 A;Experimental source: liver
 A;Note: sequence extracted from NCBI backbone (NCBIN:115350, NCBIP:115352)
 C;Superfamily: insulin

Query Match 82.6%; Score 318; DB 2; Length 176;
 Best Local Similarity 80.0%; Pred. No. 1.5e-29;
 Matches 56; Conservative 7; Mismatches 7; Indels 0; Gaps 0;

QY 1 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTVGDECCFRSCDLRRLLEY 60
 |||||
 45 GPETLCGAEIYDVTLQFVCGERGFYFSKPTGYGSSRRHNRGIVDECCFQSCELRRLLEY 104

QY 61 CAPLKPAKSA 70
 |||||
 105 CAPVKSQKAA 114

Db

RESULT 24

A54270

insulin-like growth factor-I precursor (clone OtIGFI-117A) - chinook salmon
 C;Species: Oncorhynchus tshawytscha (chinook salmon)
 C;Date: 13-Sep-1994 #sequence_revision 25-Apr-1997 #text_change 30-May-1997
 C;Accession: A54270
 R;Wallis, A.E.; Devlin, R.H.
 Mo1. Endocrinol. 7, 409-422, 1993

A;Title: Duplicate insulin-like growth factor-I genes in salmon display alternative spl
 A;Reference number: A54270; MUID:93247592; PMID:7683374
 A;Accession: A54270
 A;Status: preliminary
 A;Molecule type: mRNA
 A;Residues: 1-188 <WAL>
 A;Note: sequence extracted from NCBI backbone (NCBIN:130887, NCBIP:130891)
 C;Superfamily: insulin

Query Match 82.6%; Score 318; DB 2; Length 188;
 Best Local Similarity 80.0%; Pred. No. 1.6e-29;
 Matches 56; Conservative 7; Mismatches 7; Indels 0; Gaps 0;

QY 1 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTVGDECCFRSCDLRRLLEY 60
 |||||
 45 GPETLCGAEIYDVTLQFVCGERGFYFSKPTGYGSSRRHNRGIVDECCFQSCELRRLLEY 104

QY 61 CAPLKPAKSA 70
 |||||
 105 CAPVKSQKAA 114

Db

RESULT 25

B54270

insulin-like growth factor-I precursor (clone OtIGFI-117B) - chinook salmon
 C;Species: Oncorhynchus tshawytscha (chinook salmon)
 C;Date: 13-Sep-1994 #sequence_revision 25-Apr-1997 #text_change 30-May-1997
 C;Accession: B54270
 R;Wallis, A.E.; Devlin, R.H.
 Mo1. Endocrinol. 7, 409-422, 1993

A;Title: Duplicate insulin-like growth factor-I genes in salmon display alternative spl
 A;Reference number: A54270; MUID:93247592; PMID:7683374
 A;Accession: B54270
 A;Status: preliminary
 A;Molecule type: mRNA
 A;Residues: 1-188 <WAL>
 A;Note: sequence extracted from NCBI backbone (NCBIN:130888, NCBIP:130892)
 C;Superfamily: insulin

Query Match 82.6%; Score 318; DB 2; Length 188;
 Best Local Similarity 80.0%; Pred. No. 1.6e-29;
 Matches 56; Conservative 7; Mismatches 7; Indels 0; Gaps 0;

QY 1 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTVGDECCFRSCDLRRLLEY 60
 |||||
 45 GPETLCGAEIYDVTLQFVCGERGFYFSKPTGYGSSRRHNRGIVDECCFQSCELRRLLEY 104

QY 61 CAPLKPAKSA 70
 |||||
 105 CAPVKSQKAA 114

Db

RESULT 26

S66485

insulin-like growth factor I precursor - spiny dogfish
 C;Species: Squalus acanthias (spiny dogfish)
 C;Date: 28-Oct-1996 #sequence_revision 13-Mar-1997 #text_change 16-Jul-1999
 C;Accession: S66485; S8036
 R;Duguay, S.J.; Chan, S.J.; Mommser, T.P.; Steiner, D.F.
 FEBS Lett. 371, 69-72, 1995

A;Title: Divergence of insulin-like growth factors I and II in the elasmobranch, Squalu
 A;Reference number: S66484; MUID:95394151; PMID:7545136
 A;Accession: S66485
 A;Molecule type: mRNA
 A;Residues: 1-126 <DUG>
 A;Cross-references: EMBL:Z50081; NID:g902730; PIDN:CAA90412.1; PID:g902731
 A;Experimental source: liver
 C;Superfamily: insulin

C;Keywords: glycoprotein; growth factor
 F;1-24/Domain: signal sequence #status predicted <SIG>
 F;25-126/Product: insulin-like growth factor I #status predicted <MAT>
 F;25-53/Domain: insulin-like growth factor I chain B #status predicted <CHB>
 F;54-64/Domain: insulin connecting peptide C-like #status predicted <CPE>

A;Residues: 1-180 <SHE>
A;Cross-references: GB:J03242; NID:g183123; PIDN:AAA52545.1; PID:g183124
R;Hagiwara, K.; Kobayashi, T.; Tobita, M.; Kikyo, N.; Yazaki, Y.; Okabe, T.
Jpn. J. Cancer Res. 86, 202-207, 1995
A;Title: Isolation of a cDNA for a growth factor of vascular endothelial cells from huma
A;Reference number: I56957; MUID:95247546; PMID:7730145
A;Accession: I56957
A;Status: translated from GB/EMBL/DBJ
A;Molecule type: mRNA
A;Residues: 1-180 <HAG>
A;Cross-references: GB:S77035; NID:g914191; PIDN:AAB34155.1; PID:g914192
A;Experimental source: lung cancer cell line TSM-11
R;Bell, G.I.; Merryweather, J.P.; Sanchez-Pescador, R.; Stempien, M.M.; Priestley, L.; S
Nature 310, 775-777, 1984
A;Title: Sequence of a cDNA clone encoding human preproinsulin-like growth factor II.
A;Reference number: A93338; MUID:84295592; PMID:6382021
A;Accession: A93338
A;Molecule type: mRNA
A;Residues: 1-180 <BEL>
A;Cross-references: GB:X00910; GB:M17862; NID:G32995; PIDN:CAA25426.1; PID:G32996
R;Rinderknecht, E.; Humbel, R.E.
FEBS Lett. 89, 283-286, 1978
A;Title: Primary structure of human insulin-like growth factor II.
A;Reference number: A91448; MUID:78191259; PMID:658418
A;Accession: A91448
A;Molecule type: protein
A;Residues: 25-91 <RIN>
R;Karey, K.P.; Marguardt, H.; Sirbasku, D.A.
Blood 74, 1084-1092, 1989
A;Title: Human platelet-derived mitogens. Identification of insulinlike growth factors I
A;Reference number: A60483; MUID:89323462; PMID:2752153
A;Accession: B60483
A;Molecule type: protein
A;Residues: 25-32, X, 34-44 <KAR>
A;Experimental source: platelet lysate
R;Smith, M.C.; Cook, J.A.; Furman, T.C.; Occolowitz, J.L.
J. Biol. Chem. 264, 9314-9321, 1989
A;Title: Structure and activity dependence of recombinant human insulin-like growth fact
A;Reference number: A33845; MUID:89255428; PMID:2722836
A;Accession: A33845
A;Molecule type: protein
A;Residues: 25-91 <SMI>
R;Mohan, S.
Growth Factors 2, 267-271, 1990
A;Title: A simple and efficient scheme for the purification of insulin-like growth facto
A;Reference number: A61037; MUID:90248152; PMID:2337472
A;Accession: A61037
A;Molecule type: protein
A;Residues: 25-32 <MOH>
A;Note: this protein was purified from bone, where it comprises 0.1 % of total protein
R;Jansen, M.; van Schaik, F.M.; van Tol, H.; Van den Brande, J.L.; Sussenbach, J.S.
FEBS Lett. 179, 243-246, 1985
A;Title: Nucleotide sequences of cDNAs encoding precursors of human insulin-like growth
A;Reference number: I53458; MUID:85102019; PMID:3881277
A;Accession: I53458
A;Status: translated from GB/EMBL/DBJ
A;Molecule type: mRNA
A;Residues: 1-180 <RES>
A;Cross-references: GB:M17862; NID:G32995; PIDN:CAA25426.1; PID:G32996
R;Rall, L.B.; Scott, J.; Bell, G.I.
Meth. Enzymol. 146, 239-248, 1987
A;Title: Human insulin-like growth factor I and II messenger RNA: isolation of compleme
A;Reference number: I57044; MUID:88065102; PMID:3683205
A;Accession: I76705
A;Status: preliminary; translated from GB/EMBL/DBJ
A;Molecule type: mRNA
A;Residues: 1-2, N, 4-180 <RES>
A;Cross-references: GB:M29645; NID:g183121; PIDN:AAA52544.1; PID:g183122
R;Gray, A.; Tam, A.W.; Dull, T.J.; Hayflick, J.; Pintar, J.; Cavenee, W.K.; Koufos, A.;
DNA 6, 283-295, 1987
A;Title: Tissue-specific and developmentally regulated transcription of the insulin-like
A;Reference number: I52978; MUID:88003966; PMID:3652904

A;Accession: I52978
A;Status: translated from GB/EMBL/DBJ
A;Molecule type: DNA
A;Residues: 1-52 <REZ>
A;Cross-references: GB:M22373; NID:g183100; PIDN:AAA52536.1; PID:g553303
C;Genetics:
A;Gene: GDB:IGF2
A;Cross-references: GDB:119331; OMIM:147470
A;Map position: 11p15.5-11p15.5
C;Superfamily: insulin
C;Keywords: alternative splicing; angiogenesis; growth factor; monomer
F;1-24/Domain: signal sequence #status predicted <SIG>
F;25-91/Domain: insulin-like growth factor II #status experimental <MAT>
F;92-180/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CTP>
F;33-71,45-84,70-75/Disulfide bonds: #status experimental
Query Match 57.9%; Score 223; DB 1; Length 180;
Best Local Similarity 68.7%; Pred. No. 1.6e-18;
Matches 46; Conservative 4; Mismatches 11; Indels 6; Gaps 3;
Qy 3 ETLGAEVLVLDALQVCGDRGFYFNKPTGYGSSRRAPQTGIYDECCFRSCDLRRLMYCA 62
Db 30 ETLGGELVDTLQVCGDRGFYFRPA--SRVSRSS--RGIVECCFRSCDLALLETYCA 85
Qy 63 PLKPAKS 69
Db 86 --TPAKS 90
RESULT 31
TI0897
insulin-like growth factor II precursor - chicken
C;Species: Gallus gallus (chicken)
C;Date: 16-Jul-1999 #sequence_revision 16-Jul-1999 #text_change 21-Jul-2000
C;Accession: TI0897
R;Darling, D.C.; Brickell, P.M.
Gen. Comp. Endocrinol. 102, 283-287, 1996
A;Title: Nucleotide sequence and genomic structure of the chicken insulin-like growth
A;Reference number: Z17205; MUID:96397665; PMID:8804558
A;Accession: TI0897
A;Status: preliminary; translated from GB/EMBL/DBJ
A;Molecule type: DNA
A;Residues: 1-187 <DAR>
A;Cross-references: EMBL:S82962; NID:g1836005; PIDN:AAB46818.1; PID:g1836006
C;Genetics:
A;Introns: 52/1; 107/3
C;Superfamily: insulin
C;Keywords: angiogenesis; growth factor
Query Match 57.8%; Score 222.5; DB 2; Length 187;
Best Local Similarity 65.7%; Pred. No. 1.9e-18;
Matches 44; Conservative 4; Mismatches 14; Indels 5; Gaps 2;
Qy 3 ETLGAEVLVLDALQVCGDRGFYFNKPTGYGSSRRAPQTGIYDECCFRSCDLRRLMYCA 62
Db 29 ETLGGELVDTLQVCGDRGFYFRPVG---RNNRRINRGIYVECCFRSCDLALLETYCA 85
Qy 63 PLKPAKS 69
Db 86 --KSVKS 90
RESULT 32
IGBO2
insulin-like growth factor II precursor - bovine
N;Alternate names: IGF-II
C;Species: Bos primigenius taurus (cattle)
C;Date: 31-Mar-1988 #sequence_revision 22-Apr-1995 #text_change 23-Mar-2001
C;Accession: S10983; S37617; B25623; A34645; S00466; A57470
R;Brown, W.M.; Dziegielewska, K.M.; Foreman, R.C.; Saunders, N.R.
Nucleic Acids Res. 18, 4614, 1990
A;Title: The nucleotide and deduced amino acid sequences of insulin-like growth factor
A;Reference number: S10983; MUID:90356421; PMID:2388846

A/Accession: S10983
A/Molecule type: mRNA
A/Residues: 6-155 <BR2>
A/Cross-references: EMBL:X53553; NID:g459; PIDN:CAA37620.1; PID:g1364191
A/Experimental source: liver
R/Congote, L.F.; Marza, L.; Palfree, R.G.E.
Comp. Biochem. Physiol. B 103:127-131, 1992
A/Title: Nucleotide sequence of the central coding region of bovine erythropoietin/insulin time of hepatic erythropoiesis.
A/Reference number: S37617; MUID:93083057; PMID:1280544
A/Accession: S37617
A/Molecule type: mRNA
A/Residues: 6-62 <CON>
A/Cross-references: EMBL:X53867; NID:g461; PIDN:CAA37861.1; PID:g930004
A/Experimental source: fetal intestine
R/Honegger, A.; Humbel, R.E.
J. Biol. Chem. 261: 569-575, 1986
A/Title: Insulin-like growth factors I and II in fetal and adult bovine serum. Purification and characterization of the complementary DNAs.
A/Reference number: A92585; MUID:86085881; PMID:3941093
A/Accession: B25623
A/Molecule type: protein
R/Li, Q.; Blacher, R.; Esch, F.; Congote, L.F.
Biochem. Biophys. Res. Commun. 166: 557-561, 1990
A/Title: A heparin-binding erythroid cell stimulating factor from fetal bovine serum has biological activity.
A/Reference number: A34645; MUID:90147754; PMID:2302223
A/Accession: A34645
A/Molecule type: protein
R/Valenzano, K.J.; Remmler, J.; Lobel, P.
J. Biol. Chem. 270: 16441-16448, 1995
A/Title: Soluble insulin-like growth factor II/mannose 6-phosphate receptor carries multiple biological activities.
A/Reference number: A57470; MUID:95332360; PMID:7608216
A/Accession: A57470
A/Status: preliminary
A/Molecule type: protein
A/Residues: 1-5 <VAL>
C/Superfamily: insulin
C/Keywords: colostrum; growth factor; heparin binding; mitogen; plasma
F;1-27/Product: insulin-like growth factor II #status experimental <MAT>
F;28-40/Domain: insulin B chain-like #status experimental <DOB>
F;41-61/Domain: insulin A chain-like #status experimental <DOA>
F;62-67/Domain: D peptide #status experimental <CHD>
F;68-155/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CHE>
F;9-47,21-60,46-51/Disulfide bonds: #status predicted

Query Match 57.7%; Score 222; DB 1; Length 155;
Best Local Similarity 67.2%; Pred.No.1.8e-18;
Matches 45; Conservative 3; Mismatches 13; Indels 6; Gaps 2;

Cy 3 ETLGALVDALQVCGDRGFYFKETGSSRRAPQTGIYDECCFRSCDLRRLMYCA 62
Db 6 ETLGAGLVDLQVCGDRGFYFSRP-----SSRINRRSRGIVECCFRSCDLALLETYCA 61

Cy 63 PLKPAKS 69
Db 62 --TPAKS 66

RESULT 33
S04858
insulin-like growth factor II precursor - sheep
C/Species: Ovis orientalis aries Ovis ammon aries (domestic sheep)
C/Date: 07-Jun-1990 #sequence.revision 07-Jun-1990 #text.change 16-Jul-1999
C/Accession: S04858; S10984; S20731; S04972; S32557; S32558; A61008; S08567

R/O'Mahoney, J.V.; Adams, T.E.
Nucleic Acids Res. 17, 5392, 1989
A/Title: Nucleotide sequence of an ovine insulin-like growth factor-II cDNA.
A/Reference number: S04858; MUID:89345107; PMID:2762134
A/Accession: S04858
A/Molecule type: mRNA
A/Residues: 1-179 <OMA>
A/Cross-references: EMBL:X15248; NID:g1802; PIDN:CAA33324.1; PID:g1803
R/Brown, W.M.; Dzigniewlewska, K.M.; Foreman, R.C.; Saunders, N.R.
Nucleic Acids Res. 18, 4614, 1990
A/Title: The nucleotide and deduced amino acid sequences of insulin-like growth factor I and II from adult sheep
A/Reference number: S10983; MUID:90356421; PMID:2388846
A/Accession: S10984
A/Molecule type: mRNA
A/Residues: 1-179 <BRO>
A/Cross-references: EMBL:X53554; NID:g1262; PIDN:CAA37621.1; PID:g1263
R/Ohlsson, S.M.; Wong, E.A.
submitted to the EMBL Data Library, September 1990
A/Reference number: S20731
A/Accession: S20731
A/Status: preliminary
A/Molecule type: mRNA
A/Residues: 1-179 <OHL>
A/Cross-references: EMBL:X55638; NID:g1266; PIDN:CAA39163.1; PID:g1267
R/Hay, A.W.; Browne, C.A.; Simpson, R.J.; Thorburn, G.D.
Biochim. Biophys. Acta 997, 27-35, 1989
A/Title: Simultaneous isolation of insulin-like growth factors I and II from adult sheep
A/Reference number: S04972; MUID:89323215; PMID:2752053
A/Accession: S04972
A/Molecule type: protein
A/Residues: 25-58 <HEY>
R/Demmer, J.; Hill, D.F.; Petersen, G.B.
Biochim. Biophys. Acta 1173, 79-80, 1993
A/Title: Characterization of two sheep insulin-like growth factor II cDNAs with different biological activities.
A/Reference number: S32557; MUID:93250051; PMID:8485157
A/Accession: S32557
A/Status: nucleic acid sequence not shown; translation not shown
A/Molecule type: mRNA
A/Residues: 1-179 <DEM>
A/Cross-references: EMBL:M89788; NID:g165940; PIDN:AAA31548.1; PID:g165941
A/Note: the nucleotide sequence was submitted to the EMBL Data Library, March 1992
A/Accession: S32558
A/Status: preliminary; nucleic acid sequence not shown; translation not shown
A/Molecule type: mRNA
A/Residues: 1-120 <DEZ>
A/Cross-references: EMBL:M89789; NID:g165942; PIDN:AAA31549.1; PID:g552424
A/Note: the nucleotide sequence was submitted to the EMBL Data Library, March 1992
R/Straczek, J.; Heulin, M.H.; Chenut, A.M.; Belleville, F.; Nabet, P.; Denoroy, L.; Bar J. Chromatogr. 533, 35-46, 1990
A/Title: Application of preparative high-performance liquid chromatography to the purification of insulin-like growth factors I and II.
A/Reference number: A61008; MUID:91185520; PMID:2081780
A/Accession: A61008
A/Molecule type: protein
A/Residues: 25-32,'X',34-44,'X',46-55,'X',57,'X',59-60 <STR>
A/Experimental source: fetal serum
R/Francis, G.L.; McNeil, K.A.; Wallace, J.C.; Ballard, F.J.; Owens, P.C.
Endocrinology 124, 1173-1183, 1989
A/Title: Sheep insulin-like growth factors I and II: sequences, activities and assays.
A/Reference number: S07198; MUID:89136887; PMID:2537174
A/Accession: S08567
A/Molecule type: protein
A/Residues: 25-45,'DG',48-91 <FRA>
A/Experimental source: fetal serum
C/Superfamily: insulin
C/Keywords: growth factor; plasma
F;1-24/Domain: signal sequence #status predicted <SIG>
F;25-91/Product: insulin-like growth factor II #status experimental <MAT>
F;53-64/Domain: insulin chain B-like #status predicted <DOB>
F;65-85/Domain: insulin connecting peptide-like #status predicted <CHC>
F;86-93/Domain: insulin chain A-like #status predicted <DOA>
F;92-179/Domain: D peptide #status predicted <CHD>
F;92-179/Domain: carboxyl-terminal propeptide (E peptide) #status predicted <CPR>

R;Hampton, B.; Burgess, W.H.; Marshak, D.R.; Cullen, K.J.; Perdue, J.F.
 J. Biol. Chem. 264, 19155-19160, 1989
 A;Title: Purification and characterization of an insulin-like growth factor II variant F
 A;Reference number: A34439; MUID:90037048; PMID:2553732
 A;Accession: A34439
 A;Molecule type: protein
 A;Residues: 25-32, 'X', 34-44, 'X', 46-59 <HAM>
 C;Genetics:
 A;Gene: GDB:IGF2
 A;Cross-references: GDB:119331; OMIM:147470
 A;Map position: 11p15.5-11p15.5
 C;Superfamily: insulin
 C;Keywords: growth factor
 F;1-24/Domain: signal sequence #status predicted <SIG>
 F;25-94/Product: insulin-like growth factor II #status predicted <MAT>
 F;25-59/Domain: insulin chain B-like #status experimental <DOB>
 F;60-67/Domain: insulin connecting C peptide-like #status predicted <CPEP>
 F;68-88/Domain: insulin chain A-like #status predicted <DOA>
 F;89-94/Domain: D peptide #status predicted <DOP>
 F;95-183/Domain: carboxy-terminal propeptide (E peptide) #status predicted <CTP>
 F;33-74, 45-87, 73-78/Disulfide bonds: #status predicted

Query Match 56.5%; Score 217.5; DB 2; Length 183;
 Best Local Similarity 69.1%; Pred. No. 6.9e-18;
 Matches 47; Conservative 2; Mismatches 14; Indels 5; Gaps 3;
 QY 3 ETLGAEIYDVALQFVCGDRGFYFNKPTGYS-SRRAPQTGIVDECCFRSCDLRLRLEM 61
 Db 30 ETLGGELVDLQFVCGDRGFYFRLPGRPASVRSRS--RGIVECCFRSCDLRLLETYC 87
 QY 62 APLKPAKS 69
 Db 88 A--TPAKS 93

RESULT 39
 I67610
 insulin-like growth factor II, domains A-E - human
 C;Species: Homo sapiens (man)
 C;Date: 04-Oct-1996 #sequence_revision 04-Oct-1996 #text_change 16-Jul-1999
 C;Accession: I67610
 R;Jansen, M.; van Schaik, F.M.; van Tol, H.; Van den Brande, J.L.; Sussenbach, J.S.
 FEBS Lett. 179, 243-246, 1985
 A;Title: Nucleotide sequences of cDNAs encoding precursors of human insulin-like growth
 A;Reference number: I53458; MUID:85102019; PMID:3881277
 A;Accession: I67610
 A;Status: preliminary; translated from GB/EMBL/DBJ
 A;Molecule type: mRNA
 A;Residues: 1-183 <RES>
 A;Cross-references: GB:M17863; NID:g182527; PIDN:AAA52443.1; PID:g182528
 C;Genetics:
 A;Gene: GDB:IGF2
 A;Cross-references: GDB:119331; OMIM:147470
 A;Map position: 11p15.5-11p15.5
 C;Superfamily: insulin

Query Match 54.9%; Score 211.5; DB 2; Length 183;
 Best Local Similarity 65.7%; Pred. No. 3.4e-17;
 Matches 46; Conservative 4; Mismatches 11; Indels 9; Gaps 4;
 QY 3 ETLGAEIYDVALQFVCGDRGFYFN--KPTGYSRRAPQTGIVDECCFRSCDLRLRLEM 59
 Db 30 ETLGGELVDLQFVCGDRGFYFDFRPA--SRVRSRS--RGIVECCFRSCDLRLLET 85
 QY 60 YCAPLPAKS 69
 Db 86 YCA--TPAKS 93

RESULT 40
 A38612
 insulin-like growth factor precursor - Atlantic hagfish (fragment)
 C;Species: Myxine glutinosa (Atlantic hagfish)

C;Date: 23-Aug-1991 #sequence_revision 20-Sep-1991 #text_change 18-Jun-1993
 C;Accession: A38612
 R;Nagamatsu, S.; Chan, S.J.; Falkner, S.; Steiner, D.F.
 J. Biol. Chem. 266, 2397-2402, 1991
 A;Title: Evolution of the insulin gene superfamily. Sequence of a preproinsulin-like g
 A;Reference number: A38612; MUID:91115860; PMID:1989990
 A;Accession: A38612
 A;Status: preliminary
 A;Molecule type: mRNA
 A;Residues: 1-139 <NAG>
 A;Cross-references: GB:N57735
 A;Note: the authors translated the codon TGC for residue 21 as Ser
 C;Superfamily: insulin
 Query Match 53.6%; Score 206.5; DB 2; Length 139;
 Best Local Similarity 57.1%; Pred. No. 1e-16;
 Matches 40; Conservative 10; Mismatches 15; Indels 5; Gaps 2;
 QY 3 ETLGAEIYDVALQFVCGDRGFYF--NKPTGYSRRAPQTGIVDECCFRSCDLRLRLEM 59
 Db 41 ETLGGELVDLQFVCGDRGFYFVPPFRGHRHRRSRARKGIVECCFKGCSLALLEM 100

QY 60 YCAPLPAKS 69
 Db 101 YCA--RPSKA 108

Search completed: February 25, 2004, 06:25:08
 Job time : 13.7956 secs

Patent No. US20020146414A1
 GENERAL INFORMATION:
 APPLICANT: Sakiyama-Elbert, Shelly E.
 APPLICANT: Hubbell, Jeffrey A.
 TITLE OF INVENTION: Controlled Release of No. US20020146414A1-Heparin Binding Growth
 TITLE OF INVENTION: Factors from Heparin Containing Matrices
 FILE REFERENCE: ETH 108
 CURRENT APPLICATION NUMBER: US/09/848,664
 CURRENT FILING DATE: 2001-05-03
 PRIOR APPLICATION NUMBER: 09/298,084
 PRIOR FILING DATE: 1999-04-22
 NUMBER OF SEQ ID NOS: 31
 SOFTWARE: PatentIn Ver. 2.1
 SEQ ID NO 30
 LENGTH: 70
 TYPE: PRT
 ORGANISM: Homo sapiens
 US-09-848-664-30

Query Match 100.0%; Score 385; DB 9; Length 70;
 Best Local Similarity 100.0%; Pred. No. 2.2e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60
 Db 1 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60
 QY 61 CAPLPAKSA 70
 Db 61 CAPLPAKSA 70

RESULT 3
 US-09-903-327A-8
 Sequence 8, Application US/09903327A
 Patent No. US20020164333A1
 GENERAL INFORMATION:
 APPLICANT: Nemerow, Glen R.
 APPLICANT: Li, Erxuang
 TITLE OF INVENTION: BI-FUNCTIONAL MOLECULES AND VECTORS COMPLEXED THEREWITH FOR TARGET
 TITLE OF INVENTION: GENE DELIVERY
 FILE REFERENCE: 22908-1228
 CURRENT APPLICATION NUMBER: US/09/903,327A
 CURRENT FILING DATE: 2001-07-10
 PRIOR APPLICATION NUMBER: 09/613,017
 PRIOR FILING DATE: 2000-07-10
 NUMBER OF SEQ ID NOS: 33
 SOFTWARE: FastSeq for Windows Version 4.0
 SEQ ID NO 8
 LENGTH: 70
 TYPE: PRT
 ORGANISM: Human
 FEATURE:
 NAME/KEY: PEPTIDE
 LOCATION: (0) (0)
 OTHER INFORMATION: Human Insulin-like Growth Factor 1 sequence
 OTHER INFORMATION: (IGF-1, mature peptide)
 US-09-903-327A-8

Query Match 100.0%; Score 385; DB 9; Length 70;
 Best Local Similarity 100.0%; Pred. No. 2.2e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60
 Db 1 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60
 QY 61 CAPLPAKSA 70
 Db 61 CAPLPAKSA 70

RESULT 4
 US-09-858-935B-3
 Sequence 3, Application US/09858935B
 Publication No. US20030069177A1
 GENERAL INFORMATION:
 APPLICANT: Dubaquis, Yves
 APPLICANT: Filvaroff, Ellen
 APPLICANT: Lowman, Henry B.
 TITLE OF INVENTION: METHOD FOR TREATING CARTILAGE DISORDERS
 FILE REFERENCE: P1794R1
 CURRENT APPLICATION NUMBER: US/09/858,935B
 CURRENT FILING DATE: 2002-07-02
 PRIOR APPLICATION NUMBER: US 60/248,985
 PRIOR FILING DATE: 2000-11-15
 PRIOR APPLICATION NUMBER: US 60/204,490
 PRIOR FILING DATE: 2000-05-16
 NUMBER OF SEQ ID NOS: 153
 SEQ ID NO 3
 LENGTH: 70
 TYPE: PRT
 ORGANISM: Homo sapiens
 US-09-858-935B-3

Query Match 100.0%; Score 385; DB 10; Length 70;
 Best Local Similarity 100.0%; Pred. No. 2.2e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60
 Db 1 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60
 QY 61 CAPLPAKSA 70
 Db 61 CAPLPAKSA 70

RESULT 5
 US-10-028-410-1
 Sequence 1, Application US/10028410
 Publication No. US20020160955A1
 GENERAL INFORMATION:
 APPLICANT: Dubaquis, Yves
 APPLICANT: Lowman, Henry
 TITLE OF INVENTION: PROTEIN VARIANTIS
 FILE REFERENCE: P1712R1-1
 CURRENT APPLICATION NUMBER: US/10/028,410
 CURRENT FILING DATE: 2001-12-19
 PRIOR APPLICATION NUMBER: US/09/477,924
 PRIOR FILING DATE: 2000-01-05
 NUMBER OF SEQ ID NOS: 6
 SEQ ID NO 1
 LENGTH: 70
 TYPE: PRT
 ORGANISM: Homo sapiens
 US-10-028-410-1

Query Match 100.0%; Score 385; DB 13; Length 70;
 Best Local Similarity 100.0%; Pred. No. 2.2e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60
 Db 1 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60
 QY 61 CAPLPAKSA 70
 Db 61 CAPLPAKSA 70

RESULT 6
 US-10-066-009A-1
 Sequence 1, Application US/10066009A
 Publication No. US20020165155A1

TITLE OF INVENTION: SUBCELLULAR TARGETING OF THERAPEUTIC PROTEINS

FILE REFERENCE: SYM-007
CURRENT APPLICATION NUMBER: US/10/136,841
CURRENT FILING DATE: 2002-08-22
PRIOR APPLICATION NUMBER: US 60/287,531
PRIOR FILING DATE: 2001-04-30
PRIOR APPLICATION NUMBER: US 60/304,609
PRIOR FILING DATE: 2001-07-10
PRIOR APPLICATION NUMBER: US 60/329,461
PRIOR FILING DATE: 2001-10-15
PRIOR APPLICATION NUMBER: US 60/351,276
PRIOR FILING DATE: 2002-01-23
NUMBER OF SEQ ID NOS: 22
SOFTWARE: PatentIn version 3.0
SEQ ID NO 7
LENGTH: 70
TYPE: PRT
ORGANISM: Homo sapiens
US-10-136-841-7

Query Match 100.0%; Score 385; DB 14; Length 70;
Best Local Similarity 100.0%; Pred. No. 2.2e-40;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPOTGIIVDECCFRSCDLRLEMY 60
Db 1 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPOTGIIVDECCFRSCDLRLEMY 60
QY 61 CAPLKPAKSA 70
Db 61 CAPLKPAKSA 70

RESULT 9
US-10-444-326-1
Sequence 1, Application US/10444326
Publication No. US20030191065A1
GENERAL INFORMATION:
APPLICANT: Dubaque, Yves
TITLE OF INVENTION: PROTEIN VARIANTS
FILE REFERENCE: P1712R1
CURRENT APPLICATION NUMBER: US/10/444,326
CURRENT FILING DATE: 2003-05-22
PRIOR APPLICATION NUMBER: US/09/723,866
PRIOR FILING DATE: 2000-11-28
PRIOR APPLICATION NUMBER: US/09/477,923
PRIOR FILING DATE: 2000-01-05
NUMBER OF SEQ ID NOS: 6
SEQ ID NO 1
LENGTH: 70
TYPE: PRT
ORGANISM: Homo sapiens
US-10-444-326-1

Query Match 100.0%; Score 385; DB 14; Length 70;
Best Local Similarity 100.0%; Pred. No. 2.2e-40;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPOTGIIVDECCFRSCDLRLEMY 60
Db 1 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPOTGIIVDECCFRSCDLRLEMY 60
QY 61 CAPLKPAKSA 70
Db 61 CAPLKPAKSA 70

RESULT 10
US-10-272-531A-7
Sequence 7, Application US/10272531A
Publication No. US20040005309A1
GENERAL INFORMATION:

TITLE OF INVENTION: SUBCELLULAR TARGETING OF THERAPEUTIC PROTEINS

FILE REFERENCE: SYM-007
CURRENT APPLICATION NUMBER: US/10/136,841
CURRENT FILING DATE: 2002-08-22
PRIOR APPLICATION NUMBER: US 60/287,531
PRIOR FILING DATE: 2001-04-30
PRIOR APPLICATION NUMBER: US 60/304,609
PRIOR FILING DATE: 2001-07-10
PRIOR APPLICATION NUMBER: US 60/329,461
PRIOR FILING DATE: 2001-10-15
PRIOR APPLICATION NUMBER: US 60/351,276
PRIOR FILING DATE: 2002-01-23
NUMBER OF SEQ ID NOS: 22
SOFTWARE: PatentIn version 3.0
SEQ ID NO 7
LENGTH: 70
TYPE: PRT
ORGANISM: Homo sapiens
US-10-136-841-7

Query Match 100.0%; Score 385; DB 13; Length 70;
Best Local Similarity 100.0%; Pred. No. 2.2e-40;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPOTGIIVDECCFRSCDLRLEMY 60
Db 1 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPOTGIIVDECCFRSCDLRLEMY 60
QY 61 CAPLKPAKSA 70
Db 61 CAPLKPAKSA 70

RESULT 7
US-10-136-639-1
Sequence 1, Application US/10136639
Publication No. US20030072761A1
GENERAL INFORMATION:
APPLICANT: Lebowitz, Jonathan
TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR TARGETING PROTEINS ACROSS THE BLOOD
FILE REFERENCE: SYM-008
CURRENT APPLICATION NUMBER: US/10/136,639
CURRENT FILING DATE: 2002-09-06
PRIOR APPLICATION NUMBER: US 60/329,650
PRIOR FILING DATE: 2001-10-16
NUMBER OF SEQ ID NOS: 4
SOFTWARE: PatentIn version 3.0
SEQ ID NO 1
LENGTH: 70
TYPE: PRT
ORGANISM: Homo sapiens
US-10-136-639-1

Query Match 100.0%; Score 385; DB 14; Length 70;
Best Local Similarity 100.0%; Pred. No. 2.2e-40;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPOTGIIVDECCFRSCDLRLEMY 60
Db 1 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPOTGIIVDECCFRSCDLRLEMY 60
QY 61 CAPLKPAKSA 70
Db 61 CAPLKPAKSA 70

RESULT 8
US-10-136-841-7
Sequence 7, Application US/10136841
Publication No. US20030082176A1
GENERAL INFORMATION:
APPLICANT: Lebowitz, Jonathan
APPLICANT: Beverley, Stephen

; APPLICANT: LeBowitz, Jonathan H
 ; APPLICANT: Beverly, Stephen
 ; APPLICANT: Sly, William S.
 ; TITLE OF INVENTION: TARGETED THERAPEUTIC PROTEINS
 ; FILE REFERENCE: SYM-009
 ; CURRENT APPLICATION NUMBER: US/10/272,531A
 ; PRIOR FILING DATE: 2002-10-15
 ; PRIOR APPLICATION NUMBER: US 60/384,452
 ; PRIOR FILING DATE: 2002-05-29
 ; PRIOR APPLICATION NUMBER: US 60/386,019
 ; PRIOR FILING DATE: 2002-06-05
 ; PRIOR APPLICATION NUMBER: US 60/408,816
 ; PRIOR FILING DATE: 2002-09-06
 ; NUMBER OF SEQ ID NOS: 22
 ; SOFTWARE: PatentIn version 3.1
 ; SEQ ID NO 7
 ; LENGTH: 70
 ; TYPE: PRT
 ; ORGANISM: Homo sapiens
 US-10-272-531A-7

 Query Match 100.0%; Score 385; DB 15; Length 70;
 Best Local Similarity 100.0%; Pred. No. 2.2e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPETLCAELVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLLEMY 60
 Db 1 GPETLCAELVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLLEMY 60

 Qy 61 CAPLKPAKSA 70
 Db 61 CAPLKPAKSA 70

 RESULT 11
 US-10-272-483A-7
 ; Sequence 7, Application US/10272483A
 ; Publication No. US2004006008A1
 ; GENERAL INFORMATION:
 ; APPLICANT: LeBowitz, Jonathan H
 ; APPLICANT: Beverly, Stephen
 ; TITLE OF INVENTION: TARGETED THERAPEUTIC PROTEINS
 ; FILE REFERENCE: SYM-007CP
 ; CURRENT APPLICATION NUMBER: US/10/272,483A
 ; PRIOR FILING DATE: 2002-10-16
 ; PRIOR APPLICATION NUMBER: US 60/287,531
 ; PRIOR FILING DATE: 2001-04-30
 ; PRIOR APPLICATION NUMBER: US 10/136,841
 ; PRIOR FILING DATE: 2002-04-30
 ; PRIOR APPLICATION NUMBER: US 60/384,452
 ; PRIOR FILING DATE: 2002-05-29
 ; PRIOR APPLICATION NUMBER: US 60/386,019
 ; PRIOR FILING DATE: 2002-06-05
 ; PRIOR APPLICATION NUMBER: US 60/408,816
 ; PRIOR FILING DATE: 2002-09-06
 ; PRIOR APPLICATION NUMBER: US 60/304,609
 ; PRIOR FILING DATE: 2001-07-10
 ; PRIOR APPLICATION NUMBER: US 60/329,461
 ; PRIOR FILING DATE: 2001-10-15
 ; PRIOR APPLICATION NUMBER: US 60/351,276
 ; PRIOR FILING DATE: 2002-01-23
 ; NUMBER OF SEQ ID NOS: 22
 ; SOFTWARE: PatentIn version 3.1
 ; SEQ ID NO 7
 ; LENGTH: 70
 ; TYPE: PRT
 ; ORGANISM: Homo sapiens
 US-10-272-483A-7

 Query Match 100.0%; Score 385; DB 15; Length 70;
 Best Local Similarity 100.0%; Pred. No. 2.2e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPETLCAELVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLLEMY 60
 Db 1 GPETLCAELVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLLEMY 60

 Qy 61 CAPLKPAKSA 70
 Db 61 CAPLKPAKSA 70

 RESULT 12
 US-10-444-262-1
 ; Sequence 1, Application US/10444262
 ; Publication No. US20040023883A1
 ; GENERAL INFORMATION:
 ; APPLICANT: Dubaqui, Yves
 ; APPLICANT: Lowman, Henry
 ; TITLE OF INVENTION: PROTEIN VARIANTS
 ; FILE REFERENCE: F1712R1
 ; CURRENT APPLICATION NUMBER: US/10/444,262
 ; PRIOR FILING DATE: 2003-05-22
 ; PRIOR APPLICATION NUMBER: US/09/724,478
 ; PRIOR FILING DATE: 2000-11-28
 ; PRIOR APPLICATION NUMBER: US/09/477,923
 ; PRIOR FILING DATE: 2000-01-05
 ; NUMBER OF SEQ ID NOS: 6
 ; SEQ ID NO 1
 ; LENGTH: 70
 ; TYPE: PRT
 ; ORGANISM: Homo sapiens
 US-10-444-262-1

 Query Match 100.0%; Score 385; DB 16; Length 70;
 Best Local Similarity 100.0%; Pred. No. 2.2e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPETLCAELVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLLEMY 60
 Db 1 GPETLCAELVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLLEMY 60

 Qy 61 CAPLKPAKSA 70
 Db 61 CAPLKPAKSA 70

 RESULT 13
 US-09-852-261-10
 ; Sequence 10, Application US/09852261
 ; Patent No. US20020083477A1
 ; GENERAL INFORMATION:
 ; APPLICANT: GOLDSPIK, GEOFFREY
 ; APPLICANT: TERENGI, GIORGIO
 ; TITLE OF INVENTION: REPAIR OF NERVE DAMAGE
 ; FILE REFERENCE: 117-351
 ; CURRENT APPLICATION NUMBER: US/09/852,261
 ; PRIOR FILING DATE: 2001-05-10
 ; PRIOR APPLICATION NUMBER: GB 0011278.9
 ; PRIOR FILING DATE: 2000-05-10
 ; NUMBER OF SEQ ID NOS: 14
 ; SOFTWARE: PatentIn Ver. 2.1
 ; SEQ ID NO 10
 ; LENGTH: 105
 ; TYPE: PRT
 ; ORGANISM: Homo sapiens
 US-09-852-261-10

 Query Match 100.0%; Score 385; DB 9; Length 105;
 Best Local Similarity 100.0%; Pred. No. 3.5e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;


```

QY 61 CAPLPAKSA 70
Db 61 CAPLPAKSA 70

RESULT 14
US-10-238-114-3
; Sequence 3, Application US/10238114
; Publication No. US20030100073A1
; GENERAL INFORMATION:
; APPLICANT: Merial
; APPLICANT: ANDREONI, Christine Michele
; TITLE OF INVENTION: IGF-1 AS FELINE VACCINE ADJUVANT, IN PARTICULAR AGAINST FELINE RE
; FILE REFERENCE: 454313-3165.1
; CURRENT APPLICATION NUMBER: US/10/238,114
; PRIOR FILING DATE: 2002-09-10
; PRIOR APPLICATION NUMBER: FR 01 11736
; PRIOR FILING DATE: 2001-09-11
; PRIOR APPLICATION NUMBER: US 60/318,666
; PRIOR FILING DATE: 2001-09-12
; NUMBER OF SEQ ID NOS: 20
; SOFTWARE: Patent in version 3.1
; SEQ ID NO 3
; TYPE: PRT
; LENGTH: 105
; ORGANISM: Felis catus
; US-10-238-114-3

Query Match 100.0%; Score 385; DB 14; Length 105;
Best Local Similarity 100.0%; Pred. No. 3.5e-40;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPETLCGAEALVDALQVCGDRGFYFNKPTGYGSSRRAPQTVGDECCFRSCLRRLEMY 60
Db 1 GPETLCGAEALVDALQVCGDRGFYFNKPTGYGSSRRAPQTVGDECCFRSCLRRLEMY 60

QY 61 CAPLPAKSA 70
Db 61 CAPLPAKSA 70

RESULT 15
US-09-852-261-2
; Sequence 2, Application US/09852261
; Patent No. US20020083477A1
; GENERAL INFORMATION:
; APPLICANT: GOLDSPINK, GEOFFREY
; APPLICANT: TERENCEH, GIORGIO
; TITLE OF INVENTION: REPAIR OF NERVE DAMAGE
; FILE REFERENCE: 117-351
; CURRENT APPLICATION NUMBER: US/09/852,261
; PRIOR FILING DATE: 2001-05-10
; PRIOR APPLICATION NUMBER: GB 0011278.9
; PRIOR FILING DATE: 2000-05-10
; NUMBER OF SEQ ID NOS: 14
; SOFTWARE: Patent in Ver. 2.1
; SEQ ID NO 2
; LENGTH: 110
; TYPE: PRT
; ORGANISM: Homo sapiens
; US-09-852-261-2

Query Match 100.0%; Score 385; DB 9; Length 110;
Best Local Similarity 100.0%; Pred. No. 3.6e-40;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPETLCGAEALVDALQVCGDRGFYFNKPTGYGSSRRAPQTVGDECCFRSCLRRLEMY 60
Db 1 GPETLCGAEALVDALQVCGDRGFYFNKPTGYGSSRRAPQTVGDECCFRSCLRRLEMY 60

QY 61 CAPLPAKSA 70
Db 61 CAPLPAKSA 70

```

```

RESULT 16
US-10-179-046-14
; Sequence 14, Application US/10179046
; Publication No. US20030013154A1
; GENERAL INFORMATION:
; APPLICANT: Crawford, Kenneth
; Zaror, Isabel
; Innis, Michael
; TITLE OF INVENTION: Pichia Secretary Leader for Protein
; EXPRESSION
; NUMBER OF SEQUENCES: 40
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Charon Corporation
; STREET: 4560 Horton Street
; CITY: Emeryville
; STATE: California
; COUNTRY: United States
; ZIP: 94608
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent in Release #1.0, Version #1.30
; CURRENT APPLICATION NUMBER: US/10/179,046
; FILING DATE: 23-Jun-2002
; CLASSIFICATION: <Unknown>
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US/09/029,267
; FILING DATE: <Unknown>
; ATTORNEY/AGENT INFORMATION:
; NAME: Chung, Ling-Pong
; REGISTRATION NUMBER: 36,482
; REFERENCE/DOCKET NUMBER: 1165.100
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (510) 601-2704
; TELEFAX: (510) 655-3542
; INFORMATION FOR SEQ ID NO: 14:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 118 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; SEQUENCE DESCRIPTION: SEQ ID NO: 14:
US-10-179-046-14

Query Match 100.0%; Score 385; DB 14; Length 118;
Best Local Similarity 100.0%; Pred. No. 3.9e-40;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPETLCGAEALVDALQVCGDRGFYFNKPTGYGSSRRAPQTVGDECCFRSCLRRLEMY 60
Db 49 GPETLCGAEALVDALQVCGDRGFYFNKPTGYGSSRRAPQTVGDECCFRSCLRRLEMY 108

QY 61 CAPLPAKSA 70
Db 109 CAPLPAKSA 118

RESULT 17
US-10-251-661-8
; Sequence 8, Application US/10251661
; Publication No. US20030166555A1
; GENERAL INFORMATION:
; APPLICANT: Alberini, Cristina M.
; APPLICANT: Bear, Mark F.
; TITLE OF INVENTION: Methods and Compositions for Regulating
; MEMORY CONSOLIDATION
; FILE REFERENCE: 3499.1001-003
; CURRENT APPLICATION NUMBER: US/10/251,661

```

```

; CURRENT FILING DATE: 2002-09-20
; PRIOR APPLICATION NUMBER: 60/193,614
; PRIOR FILING DATE: 2000-03-31
; PRIOR APPLICATION NUMBER: PCT/US01/10661
; PRIOR FILING DATE: 2001-04-02
; NUMBER OF SEQ ID NOS: 12
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 8
; LENGTH: 137
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-251-661-8

```

```

Query Match 100.0%; Score 385; DB 14; Length 137;
Best Local Similarity 100.0%; Pred. No. 4.7e-40;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Qy 1 GPETLCGAEIVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRCDLRLRLEYM 60
Db 33 GPETLCGAEIVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRCDLRLRLEYM 92
Qy 61 CAPLKPAKSA 70
Db 93 CAPLKPAKSA 102

```

```

RESULT 18
US-09-919-497-74
; Sequence 74, Application US/09919497
; Patent No. US20020106662A1
; GENERAL INFORMATION:
; APPLICANT: Mutter, George L.
; TITLE OF INVENTION: PROGNOSTIC CLASSIFICATION OF ENDOMETRIAL CANCER
; FILE REFERENCE: B0801/7225
; CURRENT APPLICATION NUMBER: US/09/919,497
; CURRENT FILING DATE: 2001-07-31
; PRIOR APPLICATION NUMBER: US 60/221,735
; PRIOR FILING DATE: 2000-07-31
; NUMBER OF SEQ ID NOS: 100
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 74
; LENGTH: 153
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-919-497-74

```

```

Query Match 100.0%; Score 385; DB 9; Length 153;
Best Local Similarity 100.0%; Pred. No. 5.3e-40;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Qy 1 GPETLCGAEIVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRCDLRLRLEYM 60
Db 49 GPETLCGAEIVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRCDLRLRLEYM 108
Qy 61 CAPLKPAKSA 70
Db 109 CAPLKPAKSA 118

```

```

RESULT 19
US-10-136-639-3
; Sequence 3, Application US/10136639
; Publication No. US20030072761A1
; GENERAL INFORMATION:
; APPLICANT: LeBowitz, Jonathan
; TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR TARGETING PROTEINS ACROSS THE BLOOD
; FILE REFERENCE: SIM-008
; CURRENT APPLICATION NUMBER: US/10/136,639
; CURRENT FILING DATE: 2002-09-06
; PRIOR APPLICATION NUMBER: US 60/329,650
; PRIOR FILING DATE: 2001-10-16
; NUMBER OF SEQ ID NOS: 4

```

```

; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 3
; LENGTH: 153
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-136-639-3

```

```

Query Match 100.0%; Score 385; DB 14; Length 153;
Best Local Similarity 100.0%; Pred. No. 5.3e-40;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Qy 1 GPETLCGAEIVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRCDLRLRLEYM 60
Db 49 GPETLCGAEIVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRCDLRLRLEYM 108
Qy 61 CAPLKPAKSA 70
Db 109 CAPLKPAKSA 118

```

```

RESULT 20
US-10-238-114-2
; Sequence 2, Application US/10238114
; Publication No. US20030100073A1
; GENERAL INFORMATION:
; APPLICANT: Merial
; APPLICANT: ANDREONI, Christine Michele
; TITLE OF INVENTION: IGF-1 AS FELINE VACCINE ADJUVANT, IN PARTICULAR AGAINST FELINE R
; FILE REFERENCE: 454313-3165.1
; CURRENT APPLICATION NUMBER: US/10/238,114
; CURRENT FILING DATE: 2002-09-10
; PRIOR APPLICATION NUMBER: FR 01 11736
; PRIOR FILING DATE: 2001-09-11
; PRIOR APPLICATION NUMBER: US 60/318,666
; CURRENT FILING DATE: 2001-09-12
; NUMBER OF SEQ ID NOS: 20
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 2
; LENGTH: 153
; TYPE: PRT
; ORGANISM: Felis catus
US-10-238-114-2

```

```

Query Match 100.0%; Score 385; DB 14; Length 153;
Best Local Similarity 100.0%; Pred. No. 5.3e-40;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Qy 1 GPETLCGAEIVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRCDLRLRLEYM 60
Db 49 GPETLCGAEIVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRCDLRLRLEYM 108
Qy 61 CAPLKPAKSA 70
Db 109 CAPLKPAKSA 118

```

```

RESULT 21
US-10-207-655-55
; Sequence 55, Application US/10207655
; Publication No. US20030118592A1
; GENERAL INFORMATION:
; APPLICANT: Ledbetter, Jeffrey A.
; APPLICANT: Hayden-Ledbetter, Martha S.
; TITLE OF INVENTION: BINDING DOMAIN-IMMUNOGLOBULIN FUSION PROTEINS
; FILE REFERENCE: 390069.401C1
; CURRENT APPLICATION NUMBER: US/10/207,655
; CURRENT FILING DATE: 2002-07-25
; NUMBER OF SEQ ID NOS: 426
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 55
; LENGTH: 153
; TYPE: PRT
; ORGANISM: Homo sapiens

```

US-10-207-655-55

Query Match 100.0%; Score 385; DB 14; Length 153;
Best Local Similarity 100.0%; Pred. No. 5.3e-40;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 GPETLCGAEVLVDALQVCGDRGFYFNKFTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60
Db 49 GPETLCGAEVLVDALQVCGDRGFYFNKFTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 108

OY 61 CAPLKPAKSA 70
Db 109 CAPLKPAKSA 118

RESULT 22

US-09-921-398-39
Sequence 39, Application US/09921398
Patent No. US20020055169A1

GENERAL INFORMATION:

APPLICANT: Tekamp-Olson, Patricia
TITLE OF INVENTION: METHOD FOR EXPRESSION OF HETEROLOGOUS
PROTEINS IN YEAST

NUMBER OF SEQUENCES: 41

CORRESPONDENCE ADDRESS:

ADDRESS: Bell Seltzer IP Group of Alston & Bird, LLP
STREET: 3605 Glenwood Ave. Suite 310
CITY: Raleigh
STATE: NC
COUNTRY: US
ZIP: 27622

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patent In Release #1.0, Version #1.30

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/921,398
FILING DATE: 02-Aug-2001

CLASSIFICATION: <Unknown>

ATTORNEY/AGENT INFORMATION:

NAME: Spruill, W. Murray
REGISTRATION NUMBER: 32,943
REFERENCE/DOCKET NUMBER: 5784-4

TELECOMMUNICATION INFORMATION:

TELEPHONE: 919 420 2202

TELEFAX: 919 881 3175

INFORMATION FOR SEQ ID NO: 39:

SEQUENCE CHARACTERISTICS:

LENGTH: 155 amino acids

TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: protein

SEQUENCE DESCRIPTION: SEQ ID NO: 39:

US-09-921-398-39

Query Match 100.0%; Score 385; DB 9; Length 155;
Best Local Similarity 100.0%; Pred. No. 5.3e-40;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 GPETLCGAEVLVDALQVCGDRGFYFNKFTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60
Db 86 GPETLCGAEVLVDALQVCGDRGFYFNKFTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 145

OY 61 CAPLKPAKSA 70
Db 146 CAPLKPAKSA 155

RESULT 23

US-10-280-826-39
Sequence 39, Application US/10280826
Publication No. US20030077831A1

GENERAL INFORMATION:

APPLICANT: Tekamp-Olson, Patricia
TITLE OF INVENTION: METHOD FOR EXPRESSION OF HETEROLOGOUS
PROTEINS IN YEAST

NUMBER OF SEQUENCES: 41

CORRESPONDENCE ADDRESS:

ADDRESS: Bell Seltzer IP Group of Alston & Bird, LLP
STREET: 3605 Glenwood Ave. Suite 310
CITY: Raleigh
STATE: NC
COUNTRY: US
ZIP: 27622

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patent In Release #1.0, Version #1.30

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/10/280,826
FILING DATE: 25-Oct-2002

CLASSIFICATION: <Unknown>

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US/08/989,251

FILING DATE: <Unknown>

ATTORNEY/AGENT INFORMATION:

NAME: Spruill, W. Murray
REGISTRATION NUMBER: 32,943
REFERENCE/DOCKET NUMBER: 5784-4

TELECOMMUNICATION INFORMATION:

TELEPHONE: 919 420 2202

TELEFAX: 919 881 3175

INFORMATION FOR SEQ ID NO: 39:

SEQUENCE CHARACTERISTICS:

LENGTH: 155 amino acids

TYPE: amino acid

TOPOLOGY: linear

MOLECULE TYPE: protein

SEQUENCE DESCRIPTION: SEQ ID NO: 39:

US-10-280-826-39

Query Match 100.0%; Score 385; DB 14; Length 155;
Best Local Similarity 100.0%; Pred. No. 5.3e-40;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 GPETLCGAEVLVDALQVCGDRGFYFNKFTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60
Db 86 GPETLCGAEVLVDALQVCGDRGFYFNKFTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 145

OY 61 CAPLKPAKSA 70
Db 146 CAPLKPAKSA 155

RESULT 24

US-09-921-398-41
Sequence 41, Application US/09921398
Patent No. US20020055169A1

GENERAL INFORMATION:

APPLICANT: Tekamp-Olson, Patricia

TITLE OF INVENTION: METHOD FOR EXPRESSION OF HETEROLOGOUS
PROTEINS IN YEAST

NUMBER OF SEQUENCES: 41

CORRESPONDENCE ADDRESS:

ADDRESS: Bell Seltzer IP Group of Alston & Bird, LLP
STREET: 3605 Glenwood Ave. Suite 310
CITY: Raleigh
STATE: NC
COUNTRY: US
ZIP: 27622

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0, Version #1.30
 CURRENT APPLICATION DATA:
 APPLICATION NUMBER: US/09/921,398
 FILING DATE: 02-Aug-2001
 CLASSIFICATION: <Unknown>
 ATTORNEY/AGENT INFORMATION:
 NAME: Sptuill, W. Murray
 REGISTRATION NUMBER: 32,943
 REFERENCE/DOCKET NUMBER: 5784-4
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: 919 420 2202
 TELEFAX: 919 881 3175
 INFORMATION FOR SEQ ID NO: 41:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 191 amino acids
 TYPE: amino acid
 TOPOLOGY: linear
 MOLECULE TYPE: Protein
 SEQUENCE DESCRIPTION: SEQ ID NO: 41:

US-09-921-398-41
 Query Match 100.0%; Score 385; DB 9; Length 191;
 Best Local Similarity 100.0%; Pred. No. 6.7e-40; Indels 0; Gaps 0;
 Matches 70; Conservative 0; Mismatches 0;
 Qy 1 GPETLGGAEVLVDALQVCGDRGFYFNKPTGYGSSRRRAPQTGIVDECCFRSCDLRLRLEYM 60
 Db 86 GPETLGGAEVLVDALQVCGDRGFYFNKPTGYGSSRRRAPQTGIVDECCFRSCDLRLRLEYM 145
 Qy 61 CAPLKPAKSA 70
 Db 146 CAPLKPAKSA 155

RESULT 25
 US-10-280-826-41
 Sequence 41, Application US/10280826
 Publication No. US20030077831A1
 GENERAL INFORMATION:
 APPLICANT: Tekamp-Olson, Patricia
 TITLE OF INVENTION: METHOD FOR EXPRESSION OF HETEROLOGOUS PROTEINS IN YEAST
 NUMBER OF SEQUENCES: 41
 CORRESPONDENCE ADDRESS:
 ADDRESSEE: Bell Seltzer IP Group of Alston & Bird, LLP
 STREET: 3605 Glenwood Ave. Suite 310
 CITY: Raleigh
 STATE: NC
 COUNTRY: US
 ZIP: 27622

COMPUTER READABLE FORM:
 MEDIUM TYPE: Floppy disk
 COMPUTER: IBM PC compatible
 OPERATING SYSTEM: PC-DOS/MS-DOS
 SOFTWARE: PatentIn Release #1.0, Version #1.30
 CURRENT APPLICATION DATA:
 APPLICATION NUMBER: US/10/280,826
 FILING DATE: 25-Oct-2002
 CLASSIFICATION: <Unknown>
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: US/08/989,251
 FILING DATE: <Unknown>
 ATTORNEY/AGENT INFORMATION:
 NAME: Sptuill, W. Murray
 REGISTRATION NUMBER: 32,943
 REFERENCE/DOCKET NUMBER: 5784-4
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: 919 420 2202
 TELEFAX: 919 881 3175
 INFORMATION FOR SEQ ID NO: 41:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 191 amino acids
 TYPE: amino acid

US-10-280-826-41
 TOPOLOGY: linear
 MOLECULE TYPE: protein
 SEQUENCE DESCRIPTION: SEQ ID NO: 41:
 Query Match 100.0%; Score 385; DB 14; Length 191;
 Best Local Similarity 100.0%; Pred. No. 6.7e-40; Indels 0; Gaps 0;
 Matches 70; Conservative 0; Mismatches 0;
 Qy 1 GPETLGGAEVLVDALQVCGDRGFYFNKPTGYGSSRRRAPQTGIVDECCFRSCDLRLRLEYM 60
 Db 86 GPETLGGAEVLVDALQVCGDRGFYFNKPTGYGSSRRRAPQTGIVDECCFRSCDLRLRLEYM 145
 Qy 61 CAPLKPAKSA 70
 Db 146 CAPLKPAKSA 155

RESULT 26
 US-10-443-466A-20
 Sequence 20, Application US/10443466A
 Publication No. US20040018191A1
 GENERAL INFORMATION:
 APPLICANT: wang, yan
 APPLICANT: Pachter, Jonathan A
 APPLICANT: Hailey, Judith
 APPLICANT: Greenberg, Robert
 APPLICANT: Leonard, Presta
 APPLICANT: Brams, Peter
 APPLICANT: Feingersh, Diane
 APPLICANT: Williams, Denise
 APPLICANT: Srinivasan, Mohan
 TITLE OF INVENTION: NEUTRALIZING HUMAN ANTI-IGFR ANTIBODY
 FILE REFERENCE: OC01533-K-US
 CURRENT APPLICATION NUMBER: US/10/443,466A
 CURRENT FILING DATE: 2003-05-22
 PRIOR APPLICATION NUMBER: 60/383,459
 PRIOR FILING DATE: 2002-05-24
 PRIOR APPLICATION NUMBER: 60/393,214
 PRIOR FILING DATE: 2002-07-02
 PRIOR APPLICATION NUMBER: 60/436,254
 PRIOR FILING DATE: 2002-12-23
 NUMBER OF SEQ ID NOS: 120
 SOFTWARE: PatentIn version 3.1
 SEQ ID NO 20
 LENGTH: 195
 TYPE: PRT
 ORGANISM: Homo sapiens
 US-10-443-466A-20

Query Match 100.0%; Score 385; DB 15; Length 195;
 Best Local Similarity 100.0%; Pred. No. 6.9e-40; Indels 0; Gaps 0;
 Matches 70; Conservative 0; Mismatches 0;
 Qy 1 GPETLGGAEVLVDALQVCGDRGFYFNKPTGYGSSRRRAPQTGIVDECCFRSCDLRLRLEYM 60
 Db 49 GPETLGGAEVLVDALQVCGDRGFYFNKPTGYGSSRRRAPQTGIVDECCFRSCDLRLRLEYM 108
 Qy 61 CAPLKPAKSA 70
 Db 109 CAPLKPAKSA 118

RESULT 27
 US-09-903-327A-12
 Sequence 12, Application US/09903327A
 Patent No. US20020164333A1
 GENERAL INFORMATION:
 APPLICANT: Nemerow, Glen R.
 APPLICANT: Li, Erjuang
 TITLE OF INVENTION: BIFUNCTIONAL MOLECULES AND VECTORS COMPLEXED THEREWITH FOR TARGET
 DELIVERY
 TITLE OF INVENTION: GENE

```

; FILE REFERENCE: 22908-1228
; CURRENT APPLICATION NUMBER: US/09/903,327A
; CURRENT FILING DATE: 2001-07-10
; PRIOR APPLICATION NUMBER: 09/613,017
; PRIOR FILING DATE: 2000-07-10
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: PastSeq for Windows Version 4.0
; SEQ ID NO 12
; LENGTH: 510
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Fusion protein with N-terminal portion of DAV-1 heavy chain
; OTHER INFORMATION: and IGF-1 mature peptide
US-09-903-327A-12

```

```

Query Match          100.0%; Score 385; DB 9; Length 510;
Best Local Similarity 100.0%; Pred. No. 2e-39;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60
Db 441 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 500
QY 61 CAPLXPAKSA 70
Db 501 CAPLXPAKSA 510

```

```

RESULT 28
US-10-241-596-14
; Sequence 14, Application US/10241596
; Publication No. US20030166238A1
; GENERAL INFORMATION:
; APPLICANT: Microbiological Research Authority
; APPLICANT: The Speywood Laboratory Limited
; TITLE OF INVENTION: Recombinant Toxin Fragments
; FILE REFERENCE: 1581.0130003
; CURRENT APPLICATION NUMBER: US/10/241,596
; CURRENT FILING DATE: 2002-09-12
; PRIOR APPLICATION NUMBER: US 09/255,829
; PRIOR FILING DATE: 1999-02-23
; PRIOR APPLICATION NUMBER: US 09/242,689
; PRIOR FILING DATE: 1999-02-23
; PRIOR APPLICATION NUMBER: PCT/GB97/02273
; PRIOR FILING DATE: 1997-08-22
; PRIOR APPLICATION NUMBER: US 08/782,893
; PRIOR FILING DATE: 1996-12-27
; PRIOR APPLICATION NUMBER: GB 9625996.5
; PRIOR FILING DATE: 1996-12-13
; PRIOR APPLICATION NUMBER: GB 9617671.4
; PRIOR FILING DATE: 1996-08-23
; NUMBER OF SEQ ID NOS: 175
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 14
; LENGTH: 953
; TYPE: PRT
; ORGANISM: Clostridium botulinum
US-10-241-596-14

```

```

Query Match          100.0%; Score 385; DB 14; Length 953;
Best Local Similarity 100.0%; Pred. No. 4.1e-39;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60
Db 882 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 941
QY 61 CAPLXPAKSA 70
Db 942 CAPLXPAKSA 951

```

```

RESULT 29
US-09-852-261-14
; Sequence 14, Application US/09852261
; Patent No. US20020083477A1
; GENERAL INFORMATION:
; APPLICANT: GOLDSPIK, GEOFFREY
; APPLICANT: TERENCE, GIORGIO
; TITLE OF INVENTION: REPAIR OF NERVE DAMAGE
; FILE REFERENCE: 117-351
; CURRENT APPLICATION NUMBER: US/09/852,261
; CURRENT FILING DATE: 2001-05-10
; PRIOR APPLICATION NUMBER: GB 0011278.9
; PRIOR FILING DATE: 2000-05-10
; NUMBER OF SEQ ID NOS: 14
; SOFTWARE: PatentIn Ver. 2.1.
; SEQ ID NO 14
; LENGTH: 105
; TYPE: PRT
; ORGANISM: Oryctolagus cuniculus
US-09-852-261-14

```

```

Query Match          99.2%; Score 382; DB 9; Length 105;
Best Local Similarity 98.6%; Pred. No. 8.2e-40;
Matches 69; Conservative 1; Mismatches 0; Indels 0; Gaps 0;
QY 1 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60
Db 1 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60
QY 61 CAPLXPAKSA 70
Db 61 CAPLXPAKSA 70

```

```

RESULT 30
US-09-852-261-6
; Sequence 6, Application US/09852261
; Patent No. US20020083477A1
; GENERAL INFORMATION:
; APPLICANT: GOLDSPIK, GEOFFREY
; APPLICANT: TERENCE, GIORGIO
; TITLE OF INVENTION: REPAIR OF NERVE DAMAGE
; FILE REFERENCE: 117-351
; CURRENT APPLICATION NUMBER: US/09/852,261
; CURRENT FILING DATE: 2001-05-10
; PRIOR APPLICATION NUMBER: GB 0011278.9
; PRIOR FILING DATE: 2000-05-10
; NUMBER OF SEQ ID NOS: 14
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 6
; LENGTH: 111
; TYPE: PRT
; ORGANISM: Oryctolagus cuniculus
US-09-852-261-6

```

```

Query Match          99.2%; Score 382; DB 9; Length 111;
Best Local Similarity 98.6%; Pred. No. 8.7e-40;
Matches 69; Conservative 1; Mismatches 0; Indels 0; Gaps 0;
QY 1 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60
Db 1 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60
QY 61 CAPLXPAKSA 70
Db 61 CAPLXPAKSA 70

```

```

RESULT 31
US-10-323-046-42
; Sequence 42, Application US/10323046
; Publication No. US20030187232A1
; GENERAL INFORMATION:

```

; APPLICANT: Hubbell, Jeffrey A
 ; APPLICANT: Schense, Jason C
 ; APPLICANT: Sakiyama-Elbert, Shelly E
 ; TITLE OF INVENTION: Growth Factor Modified Protein Matrices for Tissue
 ; FILE REFERENCE: 117-351
 ; CURRENT APPLICATION NUMBER: US/09/852,261
 ; PRIOR FILING DATE: 2001-05-10
 ; PRIOR APPLICATION NUMBER: GB 0011278.9
 ; CURRENT FILING DATE: 2002-12-17
 ; CURRENT APPLICATION NUMBER: US/10/323,046
 ; PRIOR FILING DATE: 2002-12-17
 ; PRIOR APPLICATION NUMBER: 09/141,153
 ; NUMBER OF SEQ ID NOS: 43
 ; SOFTWARE: Patent In Ver. 3.1
 ; SEQ ID NO 42
 ; LENGTH: 91
 ; TYPE: PRT
 ; ORGANISM: Artificial sequence
 ; FEATURE:
 ; OTHER INFORMATION: Modified IGF 1 from Homo sapiens
 US-10-323-046-42

Query Match 98.2%; Score 378; DB 14; Length 91;
 Best Local Similarity 98.6%; Pred. No. 2.2e-39;
 Matches 69; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 QY 1 GPETLGGAEVLVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60
 Db 22 GPEVLGGAEVLVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 81
 QY 61 CAPLKPAKSA 70
 Db 82 CAPLKPAKSA 91

RESULT 32
 US-10-161-088-2
 ; Sequence 2, Application US/10161088
 ; Publication No. US2003007761A1
 ; GENERAL INFORMATION:
 ; APPLICANT: Parrow, Vendela
 ; APPLICANT: Rosengren, Linda
 ; TITLE OF INVENTION: NEW METHODS
 ; FILE REFERENCE: 13425-111001
 ; CURRENT APPLICATION NUMBER: US/10/161,088
 ; CURRENT FILING DATE: 2002-05-31
 ; PRIOR APPLICATION NUMBER: SE 0101934-8
 ; PRIOR FILING DATE: 2001-06-01
 ; NUMBER OF SEQ ID NOS: 3
 ; SOFTWARE: Fast-Seq for Windows Version 4.0
 ; SEQ ID NO 2
 ; LENGTH: 133
 ; TYPE: PRT
 ; ORGANISM: Homo sapiens
 US-10-161-088-2

Query Match 94.8%; Score 365; DB 14; Length 133;
 Best Local Similarity 94.3%; Pred. No. 1.4e-37;
 Matches 66; Conservative 1; Mismatches 3; Indels 0; Gaps 0;
 QY 1 GPETLGGAEVLVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60
 Db 23 GPEVLGGAEVLVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 82
 QY 61 CAPLKPAKSA 70
 Db 83 CAPLKPAKSA 92

RESULT 33
 US-09-852-261-12
 ; Sequence 12, Application US/09852261
 ; Patent No. US20020083477A1
 ; GENERAL INFORMATION:
 ; APPLICANT: GOLDSPIK, GEOFFREY

; APPLICANT: TERENCE, GIORGIO
 ; TITLE OF INVENTION: REPAIR OF NERVE DAMAGE
 ; FILE REFERENCE: 117-351
 ; CURRENT APPLICATION NUMBER: US/09/852,261
 ; PRIOR FILING DATE: 2001-05-10
 ; PRIOR APPLICATION NUMBER: GB 0011278.9
 ; CURRENT FILING DATE: 2000-05-10
 ; NUMBER OF SEQ ID NOS: 14
 ; SOFTWARE: Patent In Ver. 2.1
 ; SEQ ID NO 12
 ; LENGTH: 105
 ; TYPE: PRT
 ; ORGANISM: Rattus sp.
 US-09-852-261-12

Query Match 88.6%; Score 341; DB 9; Length 105;
 Best Local Similarity 90.0%; Pred. No. 1e-34;
 Matches 63; Conservative 0; Mismatches 7; Indels 0; Gaps 0;
 QY 1 GPETLGGAEVLVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60
 Db 1 GPETLGGAEVLVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60
 QY 61 CAPLKPAKSA 70
 Db 61 CVRCKEPTKSA 70

RESULT 34
 US-09-852-261-4
 ; Sequence 4, Application US/09852261
 ; Patent No. US20020083477A1
 ; GENERAL INFORMATION:
 ; APPLICANT: GOLDSPIK, GEOFFREY
 ; APPLICANT: TERENCE, GIORGIO
 ; TITLE OF INVENTION: REPAIR OF NERVE DAMAGE
 ; FILE REFERENCE: 117-351
 ; CURRENT APPLICATION NUMBER: US/09/852,261
 ; CURRENT FILING DATE: 2001-05-10
 ; PRIOR APPLICATION NUMBER: GB 0011278.9
 ; PRIOR FILING DATE: 2000-05-10
 ; NUMBER OF SEQ ID NOS: 14
 ; SOFTWARE: Patent In Ver. 2.1
 ; SEQ ID NO 4
 ; LENGTH: 111
 ; TYPE: PRT
 ; ORGANISM: Rattus sp.
 US-09-852-261-4

Query Match 88.6%; Score 341; DB 9; Length 111;
 Best Local Similarity 90.0%; Pred. No. 1.1e-34;
 Matches 63; Conservative 0; Mismatches 7; Indels 0; Gaps 0;
 QY 1 GPETLGGAEVLVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60
 Db 1 GPETLGGAEVLVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60
 QY 61 CAPLKPAKSA 70
 Db 61 CVRCKEPTKSA 70

RESULT 35
 US-10-339-740-218
 ; Sequence 218, Application US/10339740
 ; Publication No. US20030187246A1
 ; GENERAL INFORMATION:
 ; APPLICANT: Doberstein, Stephen
 ; APPLICANT: Reddy, Bindu
 ; APPLICANT: Platt, Darren
 ; APPLICANT: Ferguson, Kimberly
 ; TITLE OF INVENTION: NUCLEIC ACIDS AND PROTEINS OF C. ELEGANS INSULIN-LIKE GENES AND
 ; TITLE OF INVENTION: THEROF

```

; FILE REFERENCE: 7326-069-999
; CURRENT APPLICATION NUMBER: US/10/339,740
; CURRENT FILING DATE: 2003-01-09
; PRIOR APPLICATION NUMBER: US/09/084,303A
; PRIOR FILING DATE: 1998-05-26
; NUMBER OF SEQ ID NOS: 298
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 218
; LENGTH: 68
; TYPE: PRT
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: misc.feature
; LOCATION: (30)..(37)
; OTHER INFORMATION: Xaa = Any amino Acid
US-10-339-740-218

Query Match      82.3%; Score 317; DB 14; Length 68;
Best Local Similarity 85.7%; Pred. No. 6.1e-32;
Matches 60; Conservative 0; Mismatches 8; Indels 2; Gaps 1;

QY 1 GPETLGGALVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLEMY 60
Db 1 GPETLGGALVDALQFVCGDRGFYFNKPT-XXXXXXXXQTGIVDECCFRSCDLRLEMY 58

QY 61 CAPLKPAKSA 70
Db 59 CAPLKPAKSA 68

RESULT 36
US-10-066-009A-5
; Sequence 5, Application US/10066009A
; Publication No. US20020165155A1
; GENERAL INFORMATION:
; APPLICANT: Schaffer, Michelle
; APPLICANT: Ulteich, Mark
; APPLICANT: Vaidos, Felix
; TITLE OF INVENTION: CRYSTALLIZATION OF IGF-1
; FILE REFERENCE: P1869R1
; CURRENT APPLICATION NUMBER: US/10/066,009A
; CURRENT FILING DATE: 2002-06-24
; PRIOR APPLICATION NUMBER: US 60/287,072
; PRIOR FILING DATE: 2001-04-27
; PRIOR APPLICATION NUMBER: US 60/267,977
; PRIOR FILING DATE: 2001-02-09
; NUMBER OF SEQ ID NOS: 5
; SEQ ID NO 5
; LENGTH: 56
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Residues observed in IGF-1 structure.
US-10-066-009A-5

Query Match      77.9%; Score 300; DB 13; Length 56;
Best Local Similarity 90.3%; Pred. No. 6.4e-30;
Matches 56; Conservative 0; Mismatches 0; Indels 6; Gaps 1;

QY 3 ETLCGALVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLEMYCA 62
Db 1 ETLCGALVDALQFVCGDRGFYFNKPTGYGSS-----TGLVDECCFRSCDLRLEMYCA 54

QY 63 PL 64
Db 55 PL 56

RESULT 37
US-09-205-658-138
; Sequence 138, Application US/09205658
; Patent No. US20010029617A1
; GENERAL INFORMATION:

```

```

; APPLICANT: Ruvkun, Gary
; APPLICANT: Ogi, Scott
; TITLE OF INVENTION: THERAPEUTIC AND DIAGNOSTIC TOOLS FOR
; TITLE OF INVENTION: IMPAIRED GLUCOSE TOLERANCE CONDITIONS
; FILE REFERENCE: 00786/351004
; CURRENT APPLICATION NUMBER: US/09/205,658
; CURRENT FILING DATE: 1998-12-03
; EARLIER APPLICATION NUMBER: 08/857,076
; EARLIER FILING DATE: 1997-05-15
; EARLIER APPLICATION NUMBER: 08/888,534
; EARLIER FILING DATE: 1997-07-07
; EARLIER APPLICATION NUMBER: US98/10080
; EARLIER FILING DATE: 1998-05-15
; NUMBER OF SEQ ID NOS: 328
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 138
; LENGTH: 46
; TYPE: PRT
; ORGANISM: Bos taurus
; FEATURE:
; NAME/KEY: VARIANT
; LOCATION: (1)...(46)
; OTHER INFORMATION: Xaa = Any Amino Acid
US-09-205-658-138

Query Match      58.1%; Score 223.5; DB 9; Length 46;
Best Local Similarity 75.4%; Pred. No. 1.7e-20;
Matches 43; Conservative 0; Mismatches 3; Indels 11; Gaps 1;

QY 5 LCGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLEMYC 61
Db 1 LCGAELVDALQFVCGDRGF-----XXXAPQTGIVDECCFRSCDLRLEMYC 46

RESULT 38
US-09-205-658-139
; Sequence 139, Application US/09205658
; Patent No. US20010029617A1
; GENERAL INFORMATION:
; APPLICANT: Ruvkun, Gary
; APPLICANT: Ogi, Scott
; TITLE OF INVENTION: THERAPEUTIC AND DIAGNOSTIC TOOLS FOR
; TITLE OF INVENTION: IMPAIRED GLUCOSE TOLERANCE CONDITIONS
; FILE REFERENCE: 00786/351004
; CURRENT APPLICATION NUMBER: US/09/205,658
; CURRENT FILING DATE: 1998-12-03
; EARLIER APPLICATION NUMBER: 08/857,076
; EARLIER FILING DATE: 1997-05-15
; EARLIER APPLICATION NUMBER: 08/888,534
; EARLIER FILING DATE: 1997-07-07
; EARLIER APPLICATION NUMBER: US98/10080
; EARLIER FILING DATE: 1998-05-15
; NUMBER OF SEQ ID NOS: 328
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 139
; LENGTH: 46
; TYPE: PRT
; ORGANISM: Canis
; FEATURE:
; NAME/KEY: VARIANT
; LOCATION: (1)...(46)
; OTHER INFORMATION: Xaa = Any Amino Acid
US-09-205-658-139

Query Match      58.1%; Score 223.5; DB 9; Length 46;
Best Local Similarity 75.4%; Pred. No. 1.7e-20;
Matches 43; Conservative 0; Mismatches 3; Indels 11; Gaps 1;

QY 5 LCGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLEMYC 61
Db 1 LCGAELVDALQFVCGDRGF-----XXXAPQTGIVDECCFRSCDLRLEMYC 46

```

Query Match 58.1%; Score 223.5; DB 10; Length 46;
 Best Local Similarity 75.4%; Pred. No. 1.7e-20;
 Matches 43; Conservative 0; Mismatches 3; Indels 11; Gaps 1;

QY 5 LCGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIIVDECCFRCDLRRLEMYC 61
 |||||
 Db 1 LCGAELVDALQFVCGDRGF-----XXXAPQTGIIVDECCFRCDLRRLEMYC 46

Search completed: February 25, 2004, 06:33:32
 Job time : 30.1241 secs

RESULT 39
 US-09-963-693-138
 ; Sequence 138, Application US/09963693
 ; Publication No. US20030181364A1
 ; GENERAL INFORMATION:
 ; APPLICANT: Ruvkun, Gary
 ; APPLICANT: Ogg, Scott
 ; TITLE OF INVENTION: THERAPEUTIC AND DIAGNOSTIC TOOLS FOR
 ; TITLE OF INVENTION: IMPAIRED GLUCOSE TOLERANCE CONDITIONS
 ; FILE REFERENCE: 00786/351004
 ; CURRENT APPLICATION NUMBER: US/09/963,693
 ; CURRENT FILING DATE: 2001-09-25
 ; PRIOR APPLICATION NUMBER: US/09/205,658
 ; PRIOR FILING DATE: 1998-12-03
 ; PRIOR APPLICATION NUMBER: 08/857,076
 ; PRIOR FILING DATE: 1997-05-15
 ; PRIOR APPLICATION NUMBER: 08/888,534
 ; PRIOR FILING DATE: 1997-07-07
 ; PRIOR APPLICATION NUMBER: US98/10080
 ; PRIOR FILING DATE: 1998-05-15
 ; NUMBER OF SEQ ID NOS: 328
 ; SOFTWARE: FastSeq for Windows Version 4.0
 ; SEQ ID NO 138
 ; LENGTH: 46
 ; TYPE: PRT
 ; ORGANISM: Bos taurus
 ; FEATURE:
 ; NAME/KEY: VARIANT
 ; LOCATION: (1)...(46)
 ; OTHER INFORMATION: Xaa = Any Amino Acid
 US-09-963-693-138

Query Match 58.1%; Score 223.5; DB 10; Length 46;
 Best Local Similarity 75.4%; Pred. No. 1.7e-20;
 Matches 43; Conservative 0; Mismatches 3; Indels 11; Gaps 1;

QY 5 LCGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIIVDECCFRCDLRRLEMYC 61
 |||||
 Db 1 LCGAELVDALQFVCGDRGF-----XXXAPQTGIIVDECCFRCDLRRLEMYC 46

RESULT 40
 US-09-963-693-139
 ; Sequence 139, Application US/09963693
 ; Publication No. US20030181364A1
 ; GENERAL INFORMATION:
 ; APPLICANT: Ruvkun, Gary
 ; APPLICANT: Ogg, Scott
 ; TITLE OF INVENTION: THERAPEUTIC AND DIAGNOSTIC TOOLS FOR
 ; TITLE OF INVENTION: IMPAIRED GLUCOSE TOLERANCE CONDITIONS
 ; FILE REFERENCE: 00786/351004
 ; CURRENT APPLICATION NUMBER: US/09/963,693
 ; CURRENT FILING DATE: 2001-09-25
 ; PRIOR APPLICATION NUMBER: US/09/205,658
 ; PRIOR FILING DATE: 1998-12-03
 ; PRIOR APPLICATION NUMBER: 08/857,076
 ; PRIOR FILING DATE: 1997-05-15
 ; PRIOR APPLICATION NUMBER: 08/888,534
 ; PRIOR FILING DATE: 1997-07-07
 ; PRIOR APPLICATION NUMBER: US98/10080
 ; PRIOR FILING DATE: 1998-05-15
 ; NUMBER OF SEQ ID NOS: 328
 ; SOFTWARE: FastSeq for Windows Version 4.0
 ; SEQ ID NO 139
 ; LENGTH: 46
 ; TYPE: PRT
 ; ORGANISM: Canis
 ; FEATURE:
 ; NAME/KEY: VARIANT
 ; LOCATION: (1)...(46)
 ; OTHER INFORMATION: Xaa = Any Amino Acid
 US-09-963-693-139

GenCore version 5.1.6
Copyright (c) 1993 - 2004 Compugen Ltd.

OM protein - protein search, using sw model

Run on: February 25, 2004, 06:20:43 ; Search time 16.8613 Seconds
(without alignments)
214.326 Million cell updates/sec

Title: US-10-066-009A-1
Perfect score: 385
Sequence: 1 GPEYLCAELVDALQFVCGD.....SCDLRRLMYCAPLKPAKSA 70

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 389414 seqs, 51625971 residues

Total number of hits satisfying chosen parameters: 389414

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Issued Patents_AA.*
1: /cgm2_6/ptodata/2/iaa/5A_COMB.pep.*
2: /cgm2_6/ptodata/2/iaa/5B_COMB.pep.*
3: /cgm2_6/ptodata/2/iaa/6A_COMB.pep.*
4: /cgm2_6/ptodata/2/iaa/6B_COMB.pep.*
5: /cgm2_6/ptodata/2/iaa/PCTUS_COMB.pep.*
6: /cgm2_6/ptodata/2/iaa/backfiles1.pep.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Match	Length	ID	Description
1	385	100.0	70	1	US-07-947-035-1
2	385	100.0	70	1	US-07-776-272-17
3	385	100.0	70	1	US-07-958-903A-17
4	385	100.0	70	1	US-08-462-018-17
5	385	100.0	70	1	US-08-823-245-17
6	385	100.0	70	1	US-08-482-271-1
7	385	100.0	70	3	US-09-080-120A-1
8	385	100.0	70	3	US-08-432-517-1
9	385	100.0	70	4	US-07-963-329A-1
10	385	100.0	70	4	US-09-477-924-1
11	385	100.0	70	4	US-09-723-361-1
12	385	100.0	70	4	US-09-723-896-1
13	385	100.0	70	5	PCT-US92-09443A-1
14	385	100.0	70	5	PCT-US93-11458-1
15	385	100.0	70	5	PCT-US95-08925-1
16	385	100.0	94	1	US-07-989-845-28
17	385	100.0	94	1	US-07-989-844-12
18	385	100.0	94	1	US-08-161-044-12
19	385	100.0	94	1	US-08-240-121-12
20	385	100.0	94	1	US-08-451-241-12
21	385	100.0	94	5	PCT-US93-11297-12
22	385	100.0	94	5	PCT-US93-11298-28
23	385	100.0	118	3	US-09-029-267-14
24	385	100.0	137	1	US-07-953-230A-10
25	385	100.0	152	3	US-08-950-720A-9
26	385	100.0	153	1	US-08-219-878A-1
27	385	100.0	153	5	PCT-US93-04329-1

28	385	100.0	155	1	US-08-328-961-8	Sequence 8, Appl
29	385	100.0	155	1	US-08-462-397-8	Sequence 8, Appl
30	385	100.0	155	3	US-08-969-251-39	Sequence 39, Appl
31	385	100.0	155	3	US-09-340-250-39	Sequence 39, Appl
32	385	100.0	155	4	US-09-528-108-39	Sequence 39, Appl
33	385	100.0	156	3	US-09-142-583A-11	Sequence 11, Appl
34	385	100.0	191	3	US-08-989-251-41	Sequence 41, Appl
35	385	100.0	191	3	US-09-340-250-41	Sequence 41, Appl
36	385	100.0	191	4	US-09-528-108-41	Sequence 41, Appl
37	385	100.0	953	4	US-09-255-829-14	Sequence 14, Appl
38	382	99.2	70	1	US-08-180-572-5	Sequence 5, Appl
39	382	99.2	121	3	US-09-142-583A-4	Sequence 4, Appl
40	380	98.7	83	1	US-07-947-035-18	Sequence 18, Appl
41	380	98.7	83	1	US-08-321-585A-12	Sequence 12, Appl
42	378	98.2	119	6	5405942-1	Patent No. 5405942
43	377	97.9	70	6	5470828-1	Patent No. 5470828
44	376	97.7	70	1	US-07-854-611-2	Sequence 2, Appl
45	376	97.7	155	1	US-07-854-611-1	Sequence 1, Appl

ALIGNMENTS

RESULT 1
 US-07-947-035-1
 ; Sequence 1, Application US/07947035
 ; Patent No. 5444045
 ; GENERAL INFORMATION:
 ; APPLICANT: Francis, Geoffrey L.
 ; APPLICANT: Walton, Paul E.
 ; APPLICANT: Ballard, Francis J.
 ; APPLICANT: McMurty, John P.
 ; APPLICANT: Phelps, Patricia V.
 ; TITLE OF INVENTION: Method of Administering IGF-1, IGF-2,
 ; and Analogs Thereof to Birds
 ; NUMBER OF SEQUENCES: 18
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: Kenneth D. Sibley
 ; STREET: P.O. Drawer 34009
 ; CITY: Charlotte
 ; STATE: No. 5444045th Carolina
 ; COUNTRY: US
 ; ZIP: 28234
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: Floppy disk
 ; COMPUTER: IBM PC compatible
 ; OPERATING SYSTEM: PC-DOS/MS-DOS
 ; SOFTWARE: PatentIn Release #1.0, Version #1.30
 ; CURRENT APPLICATION DATA:
 ; APPLICATION NUMBER: US/07/947,035
 ; FILING DATE: 17-SEP-1992
 ; CLASSIFICATION: 514
 ; ATTORNEY/AGENT INFORMATION:
 ; NAME: Sibley, Kenneth D.
 ; REGISTRATION NUMBER: 31,665
 ; REFERENCE/DOCKET NUMBER: 5175-59
 ; TELECOMMUNICATION INFORMATION:
 ; TELEPHONE: (919) 881-3140
 ; TELEFAX: (919) 881-3175
 ; TELEX: 575102
 ; INFORMATION FOR SEQ ID NO: 1:
 ; SEQUENCE CHARACTERISTICS:
 ; LENGTH: 70 amino acids
 ; TYPE: amino acid
 ; STRANDEDNESS: single
 ; TOPOLOGY: linear
 ; MOLECULE TYPE: protein
 ; HYPOTHETICAL: NO
 ; HYPOTHEICAL: NO
 ; US-07-947-035-1

Query Match 100.0%; Score 385; DB 1; Length 70;
 Best Local Similarity 100.0%; Pred. No. 3.3e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

; TITLE OF INVENTION: TREATING DISORDERS BY APPLICATION
 ; TITLE OF INVENTION: OF INSULIN-LIKE GROWTH FACTORS AND
 ; TITLE OF INVENTION: ANALOGS
 ; NUMBER OF SEQUENCES: 56
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: Fish & Richardson P. C.
 ; STREET: 225 Franklin Street
 ; CITY: Boston
 ; STATE: Massachusetts
 ; COUNTRY: U.S.A.
 ; ZIP: 02110-2804
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
 ; COMPUTER: IBM PS/2 Model 50Z or 55SX
 ; OPERATING SYSTEM: MS-DOS (Version 5.0)
 ; SOFTWARE: WordPerfect (Version 5.1)
 ; CURRENT APPLICATION DATA:
 ; APPLICATION NUMBER: US/08/462,018
 ; FILING DATE:
 ; CLASSIFICATION: 435
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: 07/958,903
 ; FILING DATE: October 7, 1992
 ; APPLICATION NUMBER: 07/361,595
 ; FILING DATE: June 5, 1989
 ; APPLICATION NUMBER: 07/534,139
 ; FILING DATE: June 5, 1990
 ; APPLICATION NUMBER: 07/869,913
 ; FILING DATE: April 15, 1992
 ; ATTORNEY/AGENT INFORMATION:
 ; NAME: Clark, Paul T.
 ; REGISTRATION NUMBER: 30,162
 ; REFERENCE/DOCKET NUMBER: 02655/003005
 ; TELECOMMUNICATION INFORMATION:
 ; TELEPHONE: (617) 542-5070
 ; TELEFAX: (617) 542-8906
 ; TELEX: 200154
 ; INFORMATION FOR SEQ ID NO: 17:
 ; SEQUENCE CHARACTERISTICS:
 ; LENGTH: 70
 ; TYPE: amino acid
 ; STRANDEDNESS:
 ; TOPOLOGY: linear
 ; US-08-462-018-17

Query Match 100.0%; Score 385; DB 1; Length 70;
 Best Local Similarity 100.0%; Pred. No. 3.3e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPEITLGGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLEY 60
 Db 1 GPEITLGGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLEY 60

QY 61 CAPLPAKSA 70
 Db 61 CAPLPAKSA 70

RESULT 5
 US-08-823-245-17
 ; Sequence 17, Application US/08823245
 ; Patent No. 5776897
 ; GENERAL INFORMATION:
 ; APPLICANT: Lewis, Michael
 ; APPLICANT: Kauer, James C.
 ; APPLICANT: Smith, Kevin R.
 ; APPLICANT: Callison, Kathleen V.
 ; APPLICANT: Baldino, Frank
 ; APPLICANT: Netti, Nicola
 ; APPLICANT: Iqbal, Mohamed
 ; TITLE OF INVENTION: TREATING DISORDERS BY
 ; TITLE OF INVENTION: APPLICATION
 ; TITLE OF INVENTION: OF INSULIN-LIKE GROWTH

; TITLE OF INVENTION: FACTORS AND
 ; TITLE OF INVENTION: ANALOGS
 ; NUMBER OF SEQUENCES: 56
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: Fish & Richardson
 ; STREET: 225 Franklin Street
 ; CITY: Boston
 ; STATE: Massachusetts
 ; COUNTRY: U.S.A.
 ; ZIP: 02110-2804
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
 ; COMPUTER: IBM PS/2 Model 50Z or
 ; OPERATING SYSTEM: MS-DOS (Version 5.0)
 ; SOFTWARE: WordPerfect (Version
 ; SOFTWARE: 5.1)
 ; CURRENT APPLICATION DATA:
 ; APPLICATION NUMBER: US/08/823,245
 ; FILING DATE: March 24, 1997
 ; CLASSIFICATION: 514
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: 07/361,595
 ; FILING DATE: June 6, 1989
 ; APPLICATION NUMBER: 07/534,139
 ; FILING DATE: June 5, 1990
 ; APPLICATION NUMBER: 07/869,913
 ; FILING DATE: April 15, 1992
 ; APPLICATION NUMBER: 07/958,903
 ; FILING DATE: October 7, 1992
 ; ATTORNEY/AGENT INFORMATION:
 ; NAME: Cresson, Gary L.
 ; REGISTRATION NUMBER: 34,310
 ; REFERENCE/DOCKET NUMBER: 02655/003008
 ; TELECOMMUNICATION INFORMATION:
 ; TELEPHONE: (617) 542-5070
 ; TELEFAX: (617) 542-8906
 ; TELEX: 200154
 ; INFORMATION FOR SEQ ID NO: 17:
 ; SEQUENCE CHARACTERISTICS:
 ; LENGTH: 70
 ; TYPE: amino acid
 ; STRANDEDNESS: N/A
 ; TOPOLOGY: N/A
 ; US-08-823-245-17

Query Match 100.0%; Score 385; DB 1; Length 70;
 Best Local Similarity 100.0%; Pred. No. 3.3e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPEITLGGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLEY 60
 Db 1 GPEITLGGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLEY 60

QY 61 CAPLPAKSA 70
 Db 61 CAPLPAKSA 70

RESULT 6
 US-08-482-271-1
 ; Sequence 1, Application US/08482271
 ; Patent No. 5789547
 ; GENERAL INFORMATION:
 ; APPLICANT: Sommer, Andreas
 ; APPLICANT: Ogawa, Yasushi
 ; APPLICANT: Tao, Peggy
 ; TITLE OF INVENTION: METHOD OF PRODUCING IGF-1 AND IGFBP-3
 ; TITLE OF INVENTION: WITH CORRECT FOLDING AND DISULFIDE BONDING
 ; NUMBER OF SEQUENCES: 8
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: MORRISON & FOERSTER
 ; STREET: 755 Page Mill Road

CITY: Palo Alto
 STATE: CA
 COUNTRY: USA
 ZIP: 94304-1018
 COMPUTER READABLE FORM:
 MEDIUM TYPE: Floppy disk
 COMPUTER: IBM PC compatible
 OPERATING SYSTEM: PC-DOS/MS-DOS
 SOFTWARE: Patent In Release #1.0, Version #1.30
 CURRENT APPLICATION DATA:
 APPLICATION NUMBER: US/08/482,271
 FILING DATE: 07-JUN-1995
 CLASSIFICATION: 530
 ATTORNEY/AGENT INFORMATION:
 NAME: Park, Freddie K.
 REGISTRATION NUMBER: 35,636
 REFERENCE/DOCKET NUMBER: 22095-20284.00
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: (415) 813-5600
 TELEFAX: (415) 494-0792
 INFORMATION FOR SEQ ID NO: 1:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 70 amino acids
 TYPE: amino acid
 STRANDEDNESS: single
 TOPOLOGY: linear
 US-08-482-271-1

Query Match 100.0%; Score 385; DB 1; Length 70;
 Best Local Similarity 100.0%; Pred. No. 3.3e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 GPETLCGAEIVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLRY 60
 DB 1 GPETLCGAEIVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLRY 60
 QY 61 CAPLKPAKSA 70
 DB 61 CAPLKPAKSA 70

RESULT 7
 US-08-080-120A-1
 Sequence 1, Application US/09080120A
 Patent No. 6017885
 GENERAL INFORMATION:
 APPLICANT: BAGI, CEDO M.
 APPLICANT: BROMWAGE, ROBERT
 APPLICANT: ROSEN, DAVID M.
 APPLICANT: ADAMS, STEVEN W.
 TITLE OF INVENTION: IGF/IGFBP COMPLEX FOR PROMOTING BONE
 FORMATION AND FOR REGULATING BONE REMODELING
 NUMBER OF SEQUENCES: 7
 CORRESPONDENCE ADDRESS:
 ADDRESS: MORRISON & FOERSTER
 STREET: 755 Page Mill Road
 CITY: Palo Alto
 STATE: California
 COUNTRY: USA
 ZIP: 94304-1018
 COMPUTER READABLE FORM:
 MEDIUM TYPE: Floppy disk
 COMPUTER: IBM PC compatible
 OPERATING SYSTEM: PC-DOS/MS-DOS
 SOFTWARE: Patent In Release #1.0, Version #1.30
 CURRENT APPLICATION DATA:
 APPLICATION NUMBER: US/09/080,120A
 FILING DATE: 14-MAY-1998
 CLASSIFICATION: 514
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: US 08/806,918
 FILING DATE: 26-FEB-1997

CLASSIFICATION: 514
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: US 08/450,258
 FILING DATE: 25-MAY-1995
 CLASSIFICATION: 514
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: US 08/278,456
 FILING DATE: 20-JUL-1994
 CLASSIFICATION: 514
 ATTORNEY/AGENT INFORMATION:
 NAME: Buffinger, Nicholas
 REGISTRATION NUMBER: 39,124
 REFERENCE/DOCKET NUMBER: 220952027203
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: (650) 813-5600
 TELEFAX: (650) 494-0792
 TELEX: 706141
 INFORMATION FOR SEQ ID NO: 1:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 70 amino acids
 TYPE: amino acid
 STRANDEDNESS: single
 TOPOLOGY: linear
 US-09-080-120A-1

Query Match 100.0%; Score 385; DB 3; Length 70;
 Best Local Similarity 100.0%; Pred. No. 3.3e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 GPETLCGAEIVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLRY 60
 DB 1 GPETLCGAEIVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLRY 60
 QY 61 CAPLKPAKSA 70
 DB 61 CAPLKPAKSA 70

RESULT 8
 US-08-432-517-1
 Sequence 1, Application US/08432517
 Patent No. 6083912
 GENERAL INFORMATION:
 APPLICANT: KHOURI, ROGER K.
 TITLE OF INVENTION: METHOD FOR SOFT TISSUE AUGMENTATION
 NUMBER OF SEQUENCES: 2
 CORRESPONDENCE ADDRESS:
 ADDRESSEE: ROGERS, HOWELL & HAPERKAMP, L.C.
 STREET: 7733 FORSYTH BOULEVARD, SUITE 1400
 CITY: ST. LOUIS
 STATE: MISSOURI
 COUNTRY: USA
 ZIP: 63105-1817
 MEDIUM TYPE: Floppy disk
 COMPUTER: IBM PC compatible
 OPERATING SYSTEM: PC-DOS/MS-DOS
 SOFTWARE: Patent In Release #1.0, Version #1.25
 CURRENT APPLICATION DATA:
 APPLICATION NUMBER: US/08/432,517
 FILING DATE: 01-MAY-1995
 CLASSIFICATION: 514
 ATTORNEY/AGENT INFORMATION:
 NAME: HOLLAND, DONALD R.
 REGISTRATION NUMBER: 35,197
 REFERENCE/DOCKET NUMBER: 952584
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: (314) 727-5188
 TELEFAX: (314) 727-6032
 INFORMATION FOR SEQ ID NO: 1:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 70 amino acids
 TYPE: amino acid

```

; TOPOLOGY: linear
; MOLECULE TYPE: protein
; HYPOTHETICAL: NO
; FEATURE:
; NAME/KEY: Disulfide-bond
; LOCATION: 6..48
; OTHER INFORMATION: /note="Disulfide bond between two
; OTHER INFORMATION: cysteines."
; FEATURE:
; NAME/KEY: Disulfide-bond
; LOCATION: 18..61
; OTHER INFORMATION: /note="Disulfide bond between two
; OTHER INFORMATION: cysteines."
; FEATURE:
; NAME/KEY: Disulfide-bond
; LOCATION: 47..52
; OTHER INFORMATION: /note="Disulfide bond between two
; OTHER INFORMATION: cysteines."
; US-08-432-517-1
Query Match 100.0%; Score 385; DB 3; Length 70;
Best Local Similarity 100.0%; Pred. No. 3.3e-40;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIYDECCFRSCDLRRLRY 60
Db 1 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIYDECCFRSCDLRRLRY 60
QY 61 CAPLKPAKSA 70
Db 61 CAPLKPAKSA 70
RESULT 9
US-07-963-329A-1
; Sequence 1, Application US/07963329A
; Patent No. 6510040
; GENERAL INFORMATION:
; APPLICANT: Bozyczko-Coyne, Donna
; APPLICANT: Neff, Nicola
; APPLICANT: Lewis, Michael E.
; APPLICANT: Icbal, Mchamed
; TITLE OF INVENTION: TREATING RETINAL NEURONAL DISORDERS
; TITLE OF INVENTION: BY THE APPLICATION OF INSULIN-LIKE
; TITLE OF INVENTION: GROWTH FACTORS AND ANALOGS
; NUMBER OF SEQUENCES: 79
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Fish & Richardson
; STREET: 225 Franklin Street
; CITY: Boston
; STATE: Massachusetts
; COUNTRY: U.S.A.
; ZIP: 02110-2804
; COMPUTER READABLE FORM:
; MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
; COMPUTER: IBM PS/2 Model 50Z or 55SX
; OPERATING SYSTEM: MS-DOS (Version 5.0)
; SOFTWARE: WordPerfect (Version 5.1)
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/07/963.329A
; FILING DATE: 19921015
; CLASSIFICATION: 514
; PRIORITY APPLICATION NUMBER: 07/790,690
; FILING DATE: No. 6310040ember 9, 1991
; ATTORNEY/AGENT INFORMATION:
; NAME: Clark, Paul T.
; REGISTRATION NUMBER: 30,162
; REFERENCE/DOCKET NUMBER: 02655/012002
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (617) 542-8906
; TELEFAX: (617) 542-8906
; TELEX: 200154

```

```

; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 70
; TYPE: amino acid
; STRANDEDNESS:
; TOPOLOGY: linear
; US-07-963-329A-1
Query Match 100.0%; Score 385; DB 4; Length 70;
Best Local Similarity 100.0%; Pred. No. 3.3e-40;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIYDECCFRSCDLRRLRY 60
Db 1 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIYDECCFRSCDLRRLRY 60
QY 61 CAPLKPAKSA 70
Db 61 CAPLKPAKSA 70
RESULT 10
US-09-477-924-1
; Sequence 1, Application US/09477924
; Patent No. 6403764
; GENERAL INFORMATION:
; APPLICANT: Dubaqui, Yves
; APPLICANT: Lowman, Henry
; TITLE OF INVENTION: PROTEIN VARIANTS
; FILE REFERENCE: P1712R1-1
; CURRENT APPLICATION NUMBER: US/09/477,924
; CURRENT FILING DATE: 2000-01-05
; NUMBER OF SEQ ID NOS: 6
; SEQ ID NO 1
; LENGTH: 70
; TYPE: PRT
; ORGANISM: Homo sapiens
; US-09-477-924-1
Query Match 100.0%; Score 385; DB 4; Length 70;
Best Local Similarity 100.0%; Pred. No. 3.3e-40;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIYDECCFRSCDLRRLRY 60
Db 1 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIYDECCFRSCDLRRLRY 60
QY 61 CAPLKPAKSA 70
Db 61 CAPLKPAKSA 70
RESULT 11
US-09-723-981-1
; Sequence 1, Application US/09723981
; Patent No. 6506874
; GENERAL INFORMATION:
; APPLICANT: Dubaqui, Yves
; APPLICANT: Lowman, Henry
; TITLE OF INVENTION: PROTEIN VARIANTS
; FILE REFERENCE: P1712R1
; CURRENT APPLICATION NUMBER: US/09/723,981
; CURRENT FILING DATE: 2000-11-28
; PRIOR APPLICATION NUMBER: 09/477,923
; PRIOR FILING DATE: 2000-01-05
; NUMBER OF SEQ ID NOS: 6
; SEQ ID NO 1
; LENGTH: 70
; TYPE: PRT
; ORGANISM: Homo sapiens
; US-09-723-981-1
Query Match 100.0%; Score 385; DB 4; Length 70;

```

Best Local Similarity 100.0%; Pred. No. 3.3e-40; Mismatches 0; Indels 0; Gaps 0; Matches 70; Conservative 0

Qy 1 GPETLCAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRCDLRLRLEY 60
Db 1 GPETLCAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRCDLRLRLEY 60

Qy 61 CAPLKPAKSA 70
Db 61 CAPLKPAKSA 70

RESULT 12
US-09-723-896-1
; Sequence 1, Application US/09723896
; Patent No. 6509443
; GENERAL INFORMATION:
; APPLICANT: Dubaquie, Yves
; APPLICANT: Lowman, Henry
; TITLE OF INVENTION: PROTEIN VARIANTS
; FILE REFERENCE: P1712K1
; CURRENT APPLICATION NUMBER: US/09/723,896
; PRIOR FILING DATE: 2000-11-28
; PRIOR APPLICATION NUMBER: US/09/477,923
; PRIOR FILING DATE: 2000-01-05
; NUMBER OF SEQ ID NOS: 6
; SEQ ID NO 1
; LENGTH: 70
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-723-896-1

Query Match 100.0%; Score 385; DB 4; Length 70;
Best Local Similarity 100.0%; Pred. No. 3.3e-40; Mismatches 0; Indels 0; Gaps 0; Matches 70; Conservative 0

Qy 1 GPETLCAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRCDLRLRLEY 60
Db 1 GPETLCAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRCDLRLRLEY 60

Qy 61 CAPLKPAKSA 70
Db 61 CAPLKPAKSA 70

RESULT 13
PCT-US92-09443A-1
; Sequence 1, Application PC/TUS9209443A
; GENERAL INFORMATION:
; APPLICANT: Bozyczko-Coyne, Donna
; APPLICANT: Neff, Nicola
; APPLICANT: Lewis, Michael E.
; APPLICANT: Iqbal, Mohamed
; TITLE OF INVENTION: TREATING RETINAL NEURONAL
; TITLE OF INVENTION: DISORDERS BY THE APPLICATION OF
; TITLE OF INVENTION: INSULIN-LIKE GROWTH FACTORS AND
; TITLE OF INVENTION: ANALOGS
; NUMBER OF SEQUENCES: 79
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Fish & Richardson
; STREET: 225 Franklin Street
; CITY: Boston
; STATE: Massachusetts
; COUNTRY: U.S.A.
; ZIP: 02110-2804
; COMPUTER READABLE FORM:
; MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
; COMPUTER: IBM PS/2 Model 502 or 555X
; OPERATING SYSTEM: MS-DOS (Version 5.0)
; SOFTWARE: WordPerfect (Version 5.1)
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: PCT/US92/09443A
; FILING DATE: 19921103

CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/790,690
FILING DATE: November 8, 1991
APPLICATION NUMBER: 07/963,329
FILING DATE: October 15, 1992
ATTORNEY/AGENT INFORMATION:
NAME: Clark, Paul T.
REGISTRATION NUMBER: 30,162
REFERENCE/DOCKET NUMBER: 02655/012W02
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 542-5070
TELEFAX: (617) 542-8906
TELEX: 200154
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 70
TYPE: AMINO ACID
STRANDEDNESS: N/A
TOPOLOGY: N/A
PCT-US92-09443A-1

Query Match 100.0%; Score 385; DB 5; Length 70;
Best Local Similarity 100.0%; Pred. No. 3.3e-40; Mismatches 0; Indels 0; Gaps 0; Matches 70; Conservative 0

Qy 1 GPETLCAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRCDLRLRLEY 60
Db 1 GPETLCAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRCDLRLRLEY 60

Qy 61 CAPLKPAKSA 70
Db 61 CAPLKPAKSA 70

RESULT 14
PCT-US93-11458-1
; Sequence 1, Application PC/TUS9311458
; GENERAL INFORMATION:
; APPLICANT:
; TITLE OF INVENTION: MODIFIED INSULIN-LIKE GROWTH FACTOR
; NUMBER OF SEQUENCES: 20
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.25 (EPO)
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: PCT/US93/11458
; FILING DATE: 24-NOV-1993
; CLASSIFICATION:
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 70 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
PCT-US93-11458-1

Query Match 100.0%; Score 385; DB 5; Length 70;
Best Local Similarity 100.0%; Pred. No. 3.3e-40; Mismatches 0; Indels 0; Gaps 0; Matches 70; Conservative 0

Qy 1 GPETLCAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRCDLRLRLEY 60
Db 1 GPETLCAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRCDLRLRLEY 60

Qy 61 CAPLKPAKSA 70
Db 61 CAPLKPAKSA 70

RESULT 15
 PCT-US95-08925-1
 ; Sequence 1, Application PC/TUS9508925
 ; GENERAL INFORMATION:
 ; APPLICANT: CELTRIX PHARMACEUTICALS, INC.
 ; TITLE OF INVENTION: IGF/IGFBP COMPLEX FOR PROMOTING BONE
 ; FORMATION AND FOR REGULATING BONE REMODELING
 ; NUMBER OF SEQUENCES: 7
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: MORRISON & FOERSTER
 ; STREET: 755 Page Mill Road
 ; CITY: Palo Alto
 ; STATE: California
 ; COUNTRY: USA
 ; ZIP: 94304-1018
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: Floppy disk
 ; COMPUTER: IBM PC compatible
 ; OPERATING SYSTEM: PC-DOS/MS-DOS
 ; SOFTWARE: Patent in Release #1.0, Version #1.30
 ; CURRENT APPLICATION DATA:
 ; APPLICATION NUMBER: PCT/US95/08925
 ; FILING DATE: NEW
 ; CLASSIFICATION:
 ; ATTORNEY/AGENT INFORMATION:
 ; NAME: PARK, FREDDIE K.
 ; REGISTRATION NUMBER: 35,636
 ; REFERENCE/DOCKET NUMBER: 220952027240
 ; TELECOMMUNICATION INFORMATION:
 ; TELEPHONE: (415) 813-5600
 ; TELEFAX: (415) 494-0792
 ; TELEX: 706141
 ; INFORMATION FOR SEQ ID NO: 1:
 ; SEQUENCE CHARACTERISTICS:
 ; LENGTH: 70 amino acids
 ; TYPE: amino acid
 ; STRANDEDNESS: single
 ; TOPOLOGY: linear
 ; PCT-US95-08925-1

Query Match 100.0%; Score 385; DB 1; Length 94;
 Best Local Similarity 100.0%; Pred. No. 4.5e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 GPEITCGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60
 Db 25 GPEITCGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 84
 QY 61 CAPLKPAKSA 70
 Db 85 CAPLKPAKSA 94

RESULT 17
 US-07-989-844-12
 ; Sequence 12, Application US/07989844
 ; Patent No. 5342763
 ; GENERAL INFORMATION:
 ; APPLICANT: Swartz, James
 ; TITLE OF INVENTION: Method for Producing Polypeptide via
 ; BACTERIAL FERMENTATION
 ; NUMBER OF SEQUENCES: 21
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: Genentech, Inc.
 ; STREET: 460 Point San Bruno Blvd
 ; CITY: South San Francisco
 ; STATE: California
 ; COUNTRY: USA
 ; ZIP: 94080-4990
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: 5.25 inch, 360 Kb floppy disk
 ; COMPUTER: IBM PC compatible
 ; OPERATING SYSTEM: PC-DOS/MS-DOS
 ; SOFTWARE: patin (Genentech)
 ; CURRENT APPLICATION DATA:
 ; APPLICATION NUMBER: US/07/989,844
 ; FILING DATE: 19921123
 ; CLASSIFICATION: 435
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER:
 ; FILING DATE:
 ; ATTORNEY/AGENT INFORMATION:
 ; NAME: Hasak, Janet E.
 ; REGISTRATION NUMBER: 28,616
 ; REFERENCE/DOCKET NUMBER: 811
 ; TELECOMMUNICATION INFORMATION:
 ; TELEPHONE: 415/952-9881
 ; TELEFAX: 415/371-7168

Query Match 100.0%; Score 385; DB 5; Length 70;
 Best Local Similarity 100.0%; Pred. No. 3.3e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 GPEITCGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60
 Db 1 GPEITCGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60
 QY 61 CAPLKPAKSA 70
 Db 61 CAPLKPAKSA 70

RESULT 16
 US-07-989-845-28
 ; Sequence 28, Application US/07989845
 ; Patent No. 5304472
 ; GENERAL INFORMATION:
 ; APPLICANT: Bass, Steven
 ; TITLE OF INVENTION: METHOD OF CONTROLLING POLYPEPTIDE
 ; PRODUCTION IN BACTERIAL CELLS
 ; NUMBER OF SEQUENCES: 31
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: Genentech, Inc.
 ; STREET: 460 Point San Bruno Blvd
 ; CITY: South San Francisco
 ; STATE: California
 ; COUNTRY: USA
 ; ZIP: 94080-4990
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: 5.25 inch, 360 Kb floppy disk
 ; COMPUTER: IBM PC compatible

Query Match 100.0%; Score 385; DB 1; Length 94;
 Best Local Similarity 100.0%; Pred. No. 4.5e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 GPEITCGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60
 Db 25 GPEITCGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 84
 QY 61 CAPLKPAKSA 70
 Db 85 CAPLKPAKSA 94

RESULT 17
 US-07-989-844-12
 ; Sequence 12, Application US/07989844
 ; Patent No. 5342763
 ; GENERAL INFORMATION:
 ; APPLICANT: Swartz, James
 ; TITLE OF INVENTION: Method for Producing Polypeptide via
 ; BACTERIAL FERMENTATION
 ; NUMBER OF SEQUENCES: 21
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: Genentech, Inc.
 ; STREET: 460 Point San Bruno Blvd
 ; CITY: South San Francisco
 ; STATE: California
 ; COUNTRY: USA
 ; ZIP: 94080-4990
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: 5.25 inch, 360 Kb floppy disk
 ; COMPUTER: IBM PC compatible
 ; OPERATING SYSTEM: PC-DOS/MS-DOS
 ; SOFTWARE: patin (Genentech)
 ; CURRENT APPLICATION DATA:
 ; APPLICATION NUMBER: US/07/989,844
 ; FILING DATE: 19921123
 ; CLASSIFICATION: 435
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER:
 ; FILING DATE:
 ; ATTORNEY/AGENT INFORMATION:
 ; NAME: Hasak, Janet E.
 ; REGISTRATION NUMBER: 28,616
 ; REFERENCE/DOCKET NUMBER: 811
 ; TELECOMMUNICATION INFORMATION:
 ; TELEPHONE: 415/952-9881
 ; TELEFAX: 415/371-7168

Query Match 100.0%; Score 385; DB 5; Length 70;
 Best Local Similarity 100.0%; Pred. No. 3.3e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 GPEITCGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60
 Db 1 GPEITCGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60
 QY 61 CAPLKPAKSA 70
 Db 61 CAPLKPAKSA 70

```

; INFORMATION FOR SEQ ID NO: 12:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 94 amino acids
; TYPE: AMINO ACID
; TOPOLOGY: linear
US-07-989-844-12

Query Match 100.0%; Score 385; DB 1; Length 94;
Best Local Similarity 100.0%; Pred. No. 4.5e-40;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPETLCGAEIVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSDDLRLLEMY 60
Db 25 GPETLCGAEIVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSDDLRLLEMY 84
Qy 61 CAPLKPAKSA 70
Db 85 CAPLKPAKSA 94

```

```

; INFORMATION FOR SEQ ID NO: 12:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 94 amino acids
; TYPE: AMINO ACID
; TOPOLOGY: linear
US-07-989-844-12

Query Match 100.0%; Score 385; DB 1; Length 94;
Best Local Similarity 100.0%; Pred. No. 4.5e-40;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPETLCGAEIVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSDDLRLLEMY 60
Db 25 GPETLCGAEIVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSDDLRLLEMY 84
Qy 61 CAPLKPAKSA 70
Db 85 CAPLKPAKSA 94

```

```

RESULT 18
US-08-161-044-12
; Sequence 12, Application US/08161044
; Patent No. 5410026
; GENERAL INFORMATION:
; APPLICANT: Chang, Judy Yi-Huei
; APPLICANT: McFarland, Nancy C.
; APPLICANT: Swartz, James R.
; TITLE OF INVENTION: Method for Refolding Insoluble, Misfolded Insulin-Like Growth
; NUMBER OF SEQUENCES: 12
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Genentech, Inc.
; STREET: 460 Point San Bruno Blvd
; CITY: South San Francisco
; STATE: California
; COUNTRY: USA
; ZIP: 94080
; COMPUTER READABLE FORM:
; MEDIUM TYPE: 5.25 inch, 360 Kb floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: patin (Genentech)
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/161,044
; FILING DATE: 02-DEC-1993
; CLASSIFICATION: 530
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/808451
; FILING DATE: 06-DEC-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: Hasak, Janet E.
; REGISTRATION NUMBER: 28,616
; REFERENCE/DOCKET NUMBER: 729C1
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 415/952-9881
; TELEFAX: 415/952-9881
; TELEX: 910/371-7168
; INFORMATION FOR SEQ ID NO: 12:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 94 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
US-08-161-044-12

```

```

RESULT 18
US-08-161-044-12
; Sequence 12, Application US/08161044
; Patent No. 5410026
; GENERAL INFORMATION:
; APPLICANT: Chang, Judy Yi-Huei
; APPLICANT: McFarland, Nancy C.
; APPLICANT: Swartz, James R.
; TITLE OF INVENTION: Method for Refolding Insoluble, Misfolded Insulin-Like Growth
; NUMBER OF SEQUENCES: 12
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Genentech, Inc.
; STREET: 460 Point San Bruno Blvd
; CITY: South San Francisco
; STATE: California
; COUNTRY: USA
; ZIP: 94080
; COMPUTER READABLE FORM:
; MEDIUM TYPE: 5.25 inch, 360 Kb floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: patin (Genentech)
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/161,044
; FILING DATE: 02-DEC-1993
; CLASSIFICATION: 530
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 07/808451
; FILING DATE: 06-DEC-1991
; ATTORNEY/AGENT INFORMATION:
; NAME: Hasak, Janet E.
; REGISTRATION NUMBER: 28,616
; REFERENCE/DOCKET NUMBER: 729C1
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 415/952-9881
; TELEFAX: 415/952-9881
; TELEX: 910/371-7168
; INFORMATION FOR SEQ ID NO: 12:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 94 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
US-08-161-044-12

```

```

Query Match 100.0%; Score 385; DB 1; Length 94;
Best Local Similarity 100.0%; Pred. No. 4.5e-40;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPETLCGAEIVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSDDLRLLEMY 60
Db 25 GPETLCGAEIVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSDDLRLLEMY 84
Qy 61 CAPLKPAKSA 70
Db 85 CAPLKPAKSA 94

```

```

Query Match 100.0%; Score 385; DB 1; Length 94;
Best Local Similarity 100.0%; Pred. No. 4.5e-40;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPETLCGAEIVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSDDLRLLEMY 60
Db 25 GPETLCGAEIVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSDDLRLLEMY 84
Qy 61 CAPLKPAKSA 70
Db 85 CAPLKPAKSA 94

```

```

RESULT 20
US-08-451-241-12
; Sequence 12, Application US/08451241
; Patent No. 5633165
; GENERAL INFORMATION:
; APPLICANT: Swartz, James
; TITLE OF INVENTION: Method for Producing Polypeptide via
; NUMBER OF SEQUENCES: 21
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Genentech, Inc.
; STREET: 460 Point San Bruno Blvd
; CITY: South San Francisco
; STATE: California

```

```

RESULT 20
US-08-451-241-12
; Sequence 12, Application US/08451241
; Patent No. 5633165
; GENERAL INFORMATION:
; APPLICANT: Swartz, James
; TITLE OF INVENTION: Method for Producing Polypeptide via
; NUMBER OF SEQUENCES: 21
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Genentech, Inc.
; STREET: 460 Point San Bruno Blvd
; CITY: South San Francisco
; STATE: California

```



```

/ COUNTRY: USA
/ ZIP: 94080
/ COMPUTER READABLE FORM:
/ MEDIUM TYPE: 5.25 inch, 360 Kb floppy disk
/ OPERATING SYSTEM: PC-DOS/MS-DOS
/ SOFTWARE: patin (Genentech)
/ CURRENT APPLICATION DATA:
/ APPLICATION NUMBER: US/08/451,241
/ FILING DATE: 25-MAY-1995
/ CLASSIFICATION: 435
/ PRIORITY INFORMATION:
/ APPLICATION NUMBER: 08/240121
/ FILING DATE: 09-MAY-1994
/ PRIORITY INFORMATION:
/ APPLICATION NUMBER: 07/989844
/ FILING DATE: 23-NOV-1992
/ ATTORNEY/AGENT INFORMATION:
/ NAME: Hasak, Janet E.
/ REGISTRATION NUMBER: 28,616
/ REFERENCE/DOCKET NUMBER: P0811D2
/ TELECOMMUNICATION INFORMATION:
/ TELEPHONE: 415/225-1896
/ TELEFAX: 415/952-9881
/ TELEX: 910/371-7168
/ INFORMATION FOR SEQ ID NO: 12:
/ SEQUENCE CHARACTERISTICS:
/ LENGTH: 94 amino acids
/ TYPE: amino acid
/ TOPOLOGY: linear
/ US-08-451-241-12

```

```

Query Match 100.0%; Score 385; DB 1; Length 94;
Best Local Similarity 100.0%; Pred. NO. 4.5e-40;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```

```

QY 1 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLEMY 60
Db 25 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLEMY 84

```

```

QY 61 CAPLKPAKSA 70
Db 85 CAPLKPAKSA 94

```

```

RESULT 21
PCT-US93-11297-12
; Sequence 12, Application PC/TUS9311297
; GENERAL INFORMATION:
; APPLICANT: Genentech, Inc. et al.
; TITLE OF INVENTION: Method for Producing Polypeptide via Bacterial Fermentation
; NUMBER OF SEQUENCES: 21
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Genentech, Inc.
; STREET: 460 Point San Bruno Blvd
; CITY: South San Francisco
; STATE: California
; COUNTRY: USA
; ZIP: 94080
; COMPUTER READABLE FORM:
; MEDIUM TYPE: 5.25 inch, 360 Kb floppy disk
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: patin (Genentech)
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: PCT/US93/11297
; FILING DATE:
; CLASSIFICATION:
; PRIORITY INFORMATION:
; APPLICATION NUMBER: 07/989844
; FILING DATE: 23-NOV-1992
; ATTORNEY/AGENT INFORMATION:
; NAME: Hasak, Janet E.

```

```

/ REGISTRATION NUMBER: 28,616
/ REFERENCE/DOCKET NUMBER: 811P1
/ TELECOMMUNICATION INFORMATION:
/ TELEPHONE: 415/225-1896
/ TELEFAX: 415/952-9881
/ TELEX: 910/371-7168
/ INFORMATION FOR SEQ ID NO: 12:
/ SEQUENCE CHARACTERISTICS:
/ LENGTH: 94 amino acids
/ TYPE: amino acid
/ TOPOLOGY: linear
/ PCT-US93-11297-12

```

```

Query Match 100.0%; Score 385; DB 5; Length 94;
Best Local Similarity 100.0%; Pred. NO. 4.5e-40;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```

```

QY 1 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLEMY 60
Db 25 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLEMY 84

```

```

QY 61 CAPLKPAKSA 70
Db 85 CAPLKPAKSA 94

```

```

RESULT 22
PCT-US93-11298-28
; Sequence 28, Application PC/TUS9311298
; GENERAL INFORMATION:
; APPLICANT: Genentech, Inc.
; TITLE OF INVENTION: METHOD OF CONTROLLING POLYPEPTIDE PRODUCTION IN
; TITLE OF INVENTION: BACTERIA
; NUMBER OF SEQUENCES: 31
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Genentech, Inc.
; STREET: 460 Point San Bruno Blvd
; CITY: South San Francisco
; STATE: California
; COUNTRY: USA
; ZIP: 94080
; COMPUTER READABLE FORM:
; MEDIUM TYPE: 5.25 inch, 360 Kb floppy disk
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: patin (Genentech)
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: PCT/US93/11298
; FILING DATE:
; CLASSIFICATION:
; PRIORITY INFORMATION:
; APPLICATION NUMBER:
; FILING DATE:
; ATTORNEY/AGENT INFORMATION:
; NAME: Hasak, Janet E.
; REGISTRATION NUMBER: 28,616
; REFERENCE/DOCKET NUMBER: 752
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 415/225-1896
; TELEFAX: 415/952-9881
; TELEX: 910/371-7168
; INFORMATION FOR SEQ ID NO: 28:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 94 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; PCT-US93-11298-28

```

```

Query Match 100.0%; Score 385; DB 5; Length 94;
Best Local Similarity 100.0%; Pred. NO. 4.5e-40;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```

```

QY 1 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLEMY 60

```

Db 25 GPETLCAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLEMY 84
 Qy 61 CAPLKPAKSA 70
 Db 85 CAPLKPAKSA 94

RESULT 23
 US-09-029-267-14
 ; Sequence 14, Application US/09029267
 ; Patent No. 6107057
 ; GENERAL INFORMATION:
 ; APPLICANT: Crawford, Kenneth
 ; APPLICANT: Zarof, Isabel
 ; APPLICANT: Innis, Michael
 ; TITLE OF INVENTION: Pichia Secretary leader for Protein
 ; TITLE OF INVENTION: Expression
 ; NUMBER OF SEQUENCES: 40
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: Chiron Corporation
 ; STREET: 4560 Horton Street
 ; CITY: Emeryville
 ; STATE: California
 ; COUNTRY: United States
 ; ZIP: 94608
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: Floppy disk
 ; COMPUTER: IBM PC compatible
 ; OPERATING SYSTEM: PC-DOS/MS-DOS
 ; SOFTWARE: PatentIn Release #1.0, Version #1.30
 ; CURRENT APPLICATION DATA:
 ; APPLICATION NUMBER: US/09/029,267
 ; FILING DATE:
 ; CLASSIFICATION:
 ; ATTORNEY/AGENT INFORMATION:
 ; NAME: Chung, Ling-fong
 ; REGISTRATION NUMBER: 36,482
 ; REFERENCE/DOCKET NUMBER: 1165.100
 ; TELECOMMUNICATION INFORMATION:
 ; TELEPHONE: (510) 601-2704
 ; TELEFAX: (510) 655-3542
 ; INFORMATION FOR SEQ ID NO: 14:
 ; SEQUENCE CHARACTERISTICS:
 ; LENGTH: 118 amino acids
 ; TYPE: amino acid
 ; STRANDEDNESS: single
 ; TOPOLOGY: linear
 ; MOLECULE TYPE: protein
 ; US-09-029-267-14

Query Match 100.0%; Score 385; DB 3; Length 118;
 Best Local Similarity 100.0%; Pred. No. 5.8e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPETLCAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLEMY 60
 Db 49 GPETLCAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLEMY 108

Qy 61 CAPLKPAKSA 70
 Db 109 CAPLKPAKSA 118

RESULT 24
 US-07-953-230A-10
 ; Sequence 10, Application US/07953230A
 ; Patent No. 5476779
 ; GENERAL INFORMATION:
 ; APPLICANT: Thomas T
 ; APPLICANT: CHEN, Michael J
 ; APPLICANT: SHAMLOTT, Michael
 ; TITLE OF INVENTION: INSULIN-LIKE GROWTH FACTORS ISOLATED
 ; TITLE OF INVENTION: FROM RAINBOW TROUT

NUMBER OF SEQUENCES: 12
 CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: Buins, Doane, Swecker & Mathis
 ; STREET: George Mason Bldg., Washington & Prince Sts.
 ; CITY: Alexandria
 ; STATE: Virginia
 ; COUNTRY: United States
 ; ZIP: 22313-1404
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: Floppy disk
 ; COMPUTER: IBM PC compatible
 ; OPERATING SYSTEM: PC-DOS/MS-DOS
 ; SOFTWARE: PatentIn Release #1.0, Version #1.25
 ; CURRENT APPLICATION DATA:
 ; APPLICATION NUMBER: US/07/953,230A
 ; FILING DATE: 30-SEP-1992
 ; CLASSIFICATION: 435
 ; ATTORNEY/AGENT INFORMATION:
 ; NAME: Crane-Feury, Sharon E
 ; REGISTRATION NUMBER: 36,113
 ; REFERENCE/DOCKET NUMBER: 028755-010
 ; TELECOMMUNICATION INFORMATION:
 ; TELEPHONE: (703) 836-6620
 ; TELEFAX: (703) 836-2021
 ; INFORMATION FOR SEQ ID NO: 10:
 ; SEQUENCE CHARACTERISTICS:
 ; LENGTH: 137 amino acids
 ; TYPE: amino acid
 ; STRANDEDNESS: single
 ; TOPOLOGY: linear
 ; MOLECULE TYPE: protein
 ; FEATURE:
 ; NAME/KEY: Peptide
 ; LOCATION: 7
 ; OTHER INFORMATION: /note= "Gap of 2 after 7."
 ; FEATURE:
 ; NAME/KEY: Peptide
 ; LOCATION: 31
 ; OTHER INFORMATION: /note= "Gap of 1 after 31."
 ; FEATURE:
 ; NAME/KEY: Peptide
 ; LOCATION: 116
 ; OTHER INFORMATION: /note= "Gap of 27 after 116."
 ; US-07-953-230A-10

Query Match 100.0%; Score 385; DB 1; Length 137;
 Best Local Similarity 100.0%; Pred. No. 6.8e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPETLCAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLEMY 60
 Db 33 GPETLCAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLEMY 92

Qy 61 CAPLKPAKSA 70
 Db 93 CAPLKPAKSA 102

RESULT 25
 US-08-950-720A-9
 ; Sequence 9, Application US/08950720A
 ; Patent No. 6046028
 ; GENERAL INFORMATION:
 ; APPLICANT: Conklin, Darrell C.
 ; APPLICANT: Lofton-Day, Catherine E.
 ; APPLICANT: Lok, Si
 ; APPLICANT: Jaspers, Stephen R.
 ; TITLE OF INVENTION: INSULIN HOMOLOG
 ; NUMBER OF SEQUENCES: 17
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: ZymoGenetics, Inc.
 ; STREET: 1201 Eastlake Avenue East
 ; CITY: Seattle

STATE: WA
 COUNTRY: USA
 ZIP: 98102
 COMPUTER READABLE FORM:
 MEDIUM TYPE: Diskette
 OPERATING SYSTEM: DOS
 SOFTWARE: FastSeq for Windows Version 2.0
 CURRENT APPLICATION DATA:
 APPLICATION NUMBER: US/08/950,720A
 FILING DATE:
 CLASSIFICATION: 435
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER:
 FILING DATE:
 ATTORNEY/AGENT INFORMATION:
 NAME: Sawislak, Deborah A
 REGISTRATION NUMBER: 37,438
 REFERENCE/DOCKET NUMBER: 96-09
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: 206-442-6672
 TELEFAX: 206-442-6678
 TELEX:
 INFORMATION FOR SEQ ID NO: 9:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 152 amino acids
 TYPE: amino acid
 STRANDEDNESS: single
 TOPOLOGY: linear
 MOLECULE TYPE: No. 6046028e
 US-08-950-720A-9

Query Match 100.0%; Score 385; DB 3; Length 152;
 Best Local Similarity 100.0%; Pred. No. 7.7e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60
 Db 23 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 82

QY 61 CAPLKEPKSA 70
 Db 83 CAPLKEPKSA 92

RESULT 26
 US-08-219-878A-1
 Sequence 1, Application US/08219878A
 Patent No. 5473054
 GENERAL INFORMATION:
 APPLICANT: Bradford A. Jameson and Renato Baserga
 TITLE OF INVENTION: IGF-1 Analogs
 NUMBER OF SEQUENCES: 5
 CORRESPONDENCE ADDRESS:
 ADDRESSEE: Woodcock Washburn
 STREET: One Liberty Place - 46th Floor
 CITY: Philadelphia
 STATE: PA
 COUNTRY: USA
 ZIP: 19103
 COMPUTER READABLE FORM:
 MEDIUM TYPE: DISKETTE, 3.5 INCH, 1.44 Mb STORAGE
 OPERATING SYSTEM: IBM PC compatible
 SOFTWARE: WORDPERFECT 5.1
 CURRENT APPLICATION DATA:
 APPLICATION NUMBER: US/08/219,878A
 FILING DATE: 30-MAR-1994
 CLASSIFICATION: 514
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: US/07/881,524
 FILING DATE: 08-MAY-1992

ATTORNEY/AGENT INFORMATION:
 NAME: Mark Deluca
 REGISTRATION NUMBER: 33,229
 REFERENCE/DOCKET NUMBER: TJU-1240
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: (215) 568-3100
 TELEFAX: (215) 568-3439
 INFORMATION FOR SEQ ID NO: 1:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 153
 TYPE: amino acid
 TOPOLOGY: linear
 US-08-219-878A-1

Query Match 100.0%; Score 385; DB 1; Length 153;
 Best Local Similarity 100.0%; Pred. No. 7.7e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60
 Db 49 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 108

QY 61 CAPLKEPKSA 70
 Db 109 CAPLKEPKSA 118

RESULT 27
 PCT-US93-04329-1
 Sequence 1, Application PC/TUS9304329
 GENERAL INFORMATION:
 APPLICANT: Bradford A. Jameson and Renato Baserga
 TITLE OF INVENTION: IGF-1 Analogs
 NUMBER OF SEQUENCES: 7
 CORRESPONDENCE ADDRESS:
 ADDRESSEE: Woodcock Washburn
 STREET: One Liberty Place - 46th Floor
 CITY: Philadelphia
 STATE: PA
 COUNTRY: USA
 ZIP: 19103
 COMPUTER READABLE FORM:
 MEDIUM TYPE: DISKETTE, 3.5 INCH, 1.44 Mb STORAGE
 OPERATING SYSTEM: PC-DOS
 SOFTWARE: WORDPERFECT 5.0
 CURRENT APPLICATION DATA:
 APPLICATION NUMBER: PCT/US93/04329
 FILING DATE: 19930507
 CLASSIFICATION:
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: 07/881,524
 FILING DATE: 08-MAY-92,
 ATTORNEY/AGENT INFORMATION:
 NAME: Mark Deluca
 REGISTRATION NUMBER: 33,229
 REFERENCE/DOCKET NUMBER: TJU-0649
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: (215) 568-3100
 TELEFAX: (215) 568-3439
 INFORMATION FOR SEQ ID NO: 1:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 153
 TYPE: AMINO ACID
 TOPOLOGY: linear
 PCT-US93-04329-1

Query Match 100.0%; Score 385; DB 5; Length 153;
 Best Local Similarity 100.0%; Pred. No. 7.7e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPETLCGAEVLVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60

Db 49 GPELCCGAEVLVDFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 108
 Qy 61 CAPLKPAKSA 70
 Db 109 CAPLKPAKSA 118

APPLICANT: Seeboth, Peter
 APPLICANT: Reizman, Howard
 TITLE OF INVENTION: No. 5618690el DNA Molecules and Hosts
 NUMBER OF SEQUENCES: 15
 CORRESPONDENCE ADDRESS:
 ADDRESSEE: Ciba-Geigy Corporation
 STREET: 7 Skyline Drive
 CITY: Hawthorne
 STATE: NY
 COUNTRY: USA
 ZIP: 10532
 COMPUTER READABLE FORM:
 MEDIUM TYPE: Floppy disk
 COMPUTER: IBM PC compatible
 OPERATING SYSTEM: PC-DOS/MS-DOS
 SOFTWARE: Patent in Release #1.0, Version #1.25
 CURRENT APPLICATION DATA:
 APPLICATION NUMBER: US/08/462,397
 FILING DATE: 05-JUN-1995
 CLASSIFICATION: 435
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: US/07/989,260
 FILING DATE: 11-DEC-1992
 ATTORNEY/AGENT INFORMATION:
 NAME: Spruill, W. Murray
 REGISTRATION NUMBER: 32,943
 REFERENCE/DOCKET NUMBER: 4-18885/A
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: 919-541-8614
 TELEFAX: 919-541-8689
 INFORMATION FOR SEQ ID NO: 8:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 155 amino acids
 TYPE: amino acid
 TOPOLOGY: linear
 MOLECULE TYPE: Protein
 US-08-462-397-8

Query Match 100.0%; Score 385; DB 1; Length 155;
 Best Local Similarity 100.0%; Pred. No. 7.8e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPELCCGAEVLVDFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60
 Db 86 GPELCCGAEVLVDFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 145
 Qy 61 CAPLKPAKSA 70
 Db 146 CAPLKPAKSA 155

RESULT 30
 US-08-989-251-39
 ; Sequence 39, Application US/08989251
 ; Patent No. 6017731
 ; GENERAL INFORMATION:
 ; APPLICANT: Tekamp-Olson, Patricia
 ; TITLE OF INVENTION: METHOD FOR EXPRESSION OF HETEROLOGOUS
 ; TITLE OF INVENTION: PROTEINS IN YEAST
 ; NUMBER OF SEQUENCES: 41
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: Bell Seltzer IP Group of Alston & Bird, LLP
 ; STREET: 3605 Glenwood Ave. Suite 310
 ; CITY: Raleigh
 ; STATE: NC
 ; COUNTRY: USA
 ; ZIP: 27622
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: Floppy disk
 ; COMPUTER: IBM PC compatible
 ; OPERATING SYSTEM: PC-DOS/MS-DOS
 ; SOFTWARE: Patent in Release #1.0, Version #1.30
 ; CURRENT APPLICATION DATA:

Query Match 100.0%; Score 385; DB 1; Length 155;
 Best Local Similarity 100.0%; Pred. No. 7.8e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

RESULT 28
 US-08-328-961-8
 ; Sequence 8, Application US/08328961
 ; Patent No. 5501975
 ; GENERAL INFORMATION:
 ; APPLICANT: Chaudhuri, Bhabatosh
 ; APPLICANT: Stephan, Christine
 ; APPLICANT: Seeboth, Peter
 ; APPLICANT: Reizman, Howard
 ; TITLE OF INVENTION: No. 5501975el DNA Molecules and Hosts
 ; NUMBER OF SEQUENCES: 15
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: Ciba-Geigy Corporation
 ; STREET: 7 Skyline Drive
 ; CITY: Hawthorne
 ; STATE: NY
 ; COUNTRY: USA
 ; ZIP: 10532
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: Floppy disk
 ; COMPUTER: IBM PC compatible
 ; OPERATING SYSTEM: PC-DOS/MS-DOS
 ; SOFTWARE: Patent in Release #1.0, Version #1.25
 ; CURRENT APPLICATION DATA:
 ; APPLICATION NUMBER: US/08/328,961
 ; FILING DATE:
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: US/07/989,260
 ; FILING DATE: 11-DEC-1992
 ; ATTORNEY/AGENT INFORMATION:
 ; NAME: Spruill, W. Murray
 ; REGISTRATION NUMBER: 32,943
 ; REFERENCE/DOCKET NUMBER: 4-18885/A
 ; TELECOMMUNICATION INFORMATION:
 ; TELEPHONE: 919-541-8614
 ; TELEFAX: 919-541-8689
 ; INFORMATION FOR SEQ ID NO: 8:
 ; SEQUENCE CHARACTERISTICS:
 ; LENGTH: 155 amino acids
 ; TYPE: amino acid
 ; TOPOLOGY: linear
 ; MOLECULE TYPE: protein
 ; US-08-328-961-8

Query Match 100.0%; Score 385; DB 1; Length 155;
 Best Local Similarity 100.0%; Pred. No. 7.8e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPELCCGAEVLVDFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60
 Db 86 GPELCCGAEVLVDFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 145
 Qy 61 CAPLKPAKSA 70
 Db 146 CAPLKPAKSA 155

RESULT 29
 US-08-462-397-8
 ; Sequence 8, Application US/08462397
 ; Patent No. 5618690
 ; GENERAL INFORMATION:
 ; APPLICANT: Chaudhuri, Bhabatosh
 ; APPLICANT: Stephan, Christine

APPLICATION NUMBER: US/08/989,251
 FILING DATE:
 CLASSIFICATION:
 ATTORNEY/AGENT INFORMATION:
 NAME: Spruill, W. Murray
 REGISTRATION NUMBER: 32,943
 REFERENCE/DOCKET NUMBER: 5784-4
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: 919 420 2202
 TELEFAX: 919 881 3175
 INFORMATION FOR SEQ ID NO: 39:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 155 amino acids
 TYPE: amino acid
 TOPOLOGY: linear
 MOLECULE TYPE: protein
 US-08-989-251-39

Query Match 100.0%; Score 385; DB 3; Length 155;
 Best Local Similarity 100.0%; Pred. No. 7.8e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRLEY 60
 Db 86 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRLEY 145

QY 61 CAPLKPAKSA 70
 Db 146 CAPLKPAKSA 155

RESULT 31
 US-09-340-250-39
 Sequence 39, Application US/09340250
 Patent No. 6083723
 GENERAL INFORMATION:
 APPLICANT: Tekamp-Olson, Patricia
 TITLE OF INVENTION: METHOD FOR EXPRESSION OF HETEROLOGOUS
 TITLE OF INVENTION: PROTEINS IN YEAST
 NUMBER OF SEQUENCES: 41
 CORRESPONDENCE ADDRESS:
 ADDRESS: Bell Seltzer IP Group of Alston & Bird, LLP
 STREET: 3605 Glenwood Ave. Suite 310
 CITY: Raleigh
 STATE: NC
 COUNTRY: US
 ZIP: 27622
 COMPUTER READABLE FORM:
 MEDIUM TYPE: Floppy disk
 COMPUTER: IBM PC compatible
 OPERATING SYSTEM: PC-DOS/MS-DOS
 SOFTWARE: PatentIn Release #1.0, Version #1.30
 CURRENT APPLICATION DATA:
 APPLICATION NUMBER: US/09/340,250
 FILING DATE:
 CLASSIFICATION:
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: 08/989,251
 FILING DATE:
 ATTORNEY/AGENT INFORMATION:
 NAME: Spruill, W. Murray
 REGISTRATION NUMBER: 32,943
 REFERENCE/DOCKET NUMBER: 5784-4
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: 919 420 2202
 TELEFAX: 919 881 3175
 INFORMATION FOR SEQ ID NO: 39:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 155 amino acids
 TYPE: amino acid
 TOPOLOGY: linear
 MOLECULE TYPE: protein
 US-09-340-250-39

Query Match 100.0%; Score 385; DB 3; Length 155;
 Best Local Similarity 100.0%; Pred. No. 7.8e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRLEY 60
 Db 86 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRLEY 145

QY 61 CAPLKPAKSA 70
 Db 146 CAPLKPAKSA 155

RESULT 32
 US-09-528-108-39
 Sequence 39, Application US/09528108
 Patent No. 6312923
 GENERAL INFORMATION:
 APPLICANT: Tekamp-Olson, Patricia
 TITLE OF INVENTION: METHOD FOR EXPRESSION OF HETEROLOGOUS
 TITLE OF INVENTION: PROTEINS IN YEAST
 NUMBER OF SEQUENCES: 41
 CORRESPONDENCE ADDRESS:
 ADDRESS: Bell Seltzer IP Group of Alston & Bird, LLP
 STREET: 3605 Glenwood Ave. Suite 310
 CITY: Raleigh
 STATE: NC
 COUNTRY: US
 ZIP: 27622
 COMPUTER READABLE FORM:
 MEDIUM TYPE: Floppy disk
 COMPUTER: IBM PC compatible
 OPERATING SYSTEM: PC-DOS/MS-DOS
 SOFTWARE: PatentIn Release #1.0, Version #1.30
 CURRENT APPLICATION DATA:
 APPLICATION NUMBER: US/09/528,108
 FILING DATE:
 CLASSIFICATION:
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: 08/989,251
 FILING DATE:
 ATTORNEY/AGENT INFORMATION:
 NAME: Spruill, W. Murray
 REGISTRATION NUMBER: 32,943
 REFERENCE/DOCKET NUMBER: 5784-4
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: 919 420 2202
 TELEFAX: 919 881 3175
 INFORMATION FOR SEQ ID NO: 39:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 155 amino acids
 TYPE: amino acid
 TOPOLOGY: linear
 MOLECULE TYPE: protein
 US-09-528-108-39

Query Match 100.0%; Score 385; DB 4; Length 155;
 Best Local Similarity 100.0%; Pred. No. 7.8e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRLEY 60
 Db 86 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRLEY 145

QY 61 CAPLKPAKSA 70
 Db 146 CAPLKPAKSA 155

RESULT 33
 US-09-142-583A-11
 Sequence 11, Application US/09142583A

Patent No. 6221842
 GENERAL INFORMATION:
 APPLICANT: GOLDSPIK, GEOFFREY
 TITLE OF INVENTION: METHOD OF TREATING MUSCULAR DISORDERS
 NUMBER OF SEQUENCES: 11
 CORRESPONDENCE ADDRESS:
 ADDRESSEE: NIXON & VANDERHYE P. C.
 STREET: 1100 NORTH GLEBE ROAD
 CITY: ARLINGTON
 STATE: VA
 COUNTRY: USA
 ZIP: 22201
 COMPUTER READABLE FORM:
 MEDIUM TYPE: Floppy disk
 COMPUTER: IBM PC compatible
 OPERATING SYSTEM: PC-DOS/MS-DOS
 SOFTWARE: PatentIn Release #1.0, Version #1.25
 CURRENT APPLICATION NUMBER: US/09/142,583A
 FILING DATE: 29-Oct-1998
 CLASSIFICATION: <unknown>
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: WO PCT/GB97/00658
 FILING DATE: 11-MAR-1997
 APPLICATION NUMBER: GB 9605124.8
 FILING DATE: 11-MAR-1996
 ATTORNEY/AGENT INFORMATION:
 NAME: SADOFF, B. J.
 REGISTRATION NUMBER: 36663
 REFERENCE/DOCKET NUMBER: 117-263
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: 7038164000
 TELEFAX: 7038164100
 INFORMATION FOR SEQ ID NO: 11:
 MOLECULE TYPE: protein
 SEQUENCE CHARACTERISTICS:
 LENGTH: 156 amino acids
 TYPE: amino acid
 TOPOLOGY: linear
 MEDIUM TYPE: Floppy disk
 US-09-142-583A-11
 Query Match 100.0%; Score 385; DB 3; Length 156;
 Best Local Similarity 100.0%; Pred. No. 7.9e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPELTCGAEVLVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLRY 60
 Db 52 GPELTCGAEVLVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLRY 111
 Qy 61 CAPLKPAKSA 70
 Db 112 CAPLKPAKSA 121

RESULT 34
 US-08-989-251-41
 Sequence 41, Application US/08989251
 Patent No. 6017731
 GENERAL INFORMATION:
 APPLICANT: Tekamp-Olson, Patricia
 TITLE OF INVENTION: METHOD FOR EXPRESSION OF HETEROLOGOUS
 PROTEINS IN YEAST
 NUMBER OF SEQUENCES: 41
 CORRESPONDENCE ADDRESS:
 ADDRESSEE: Bell Seitzer IP Group of Alston & Bird, LLP
 STREET: 3605 Glenwood Ave. Suite 310
 CITY: Raleigh
 STATE: NC
 COUNTRY: US
 ZIP: 27622
 COMPUTER READABLE FORM:
 MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible
 OPERATING SYSTEM: PC-DOS/MS-DOS
 SOFTWARE: PatentIn Release #1.0, Version #1.30
 CURRENT APPLICATION NUMBER: US/08/989,251
 FILING DATE:
 CLASSIFICATION:
 ATTORNEY/AGENT INFORMATION:
 NAME: Spruill, W. Murray
 REGISTRATION NUMBER: 32,943
 REFERENCE/DOCKET NUMBER: 5784-4
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: 919 420 2202
 TELEFAX: 919 881 3175
 INFORMATION FOR SEQ ID NO: 41:
 TYPE: amino acid
 LENGTH: 191 amino acids
 TOPOLOGY: linear
 MOLECULE TYPE: protein
 US-08-989-251-41
 Query Match 100.0%; Score 385; DB 3; Length 191;
 Best Local Similarity 100.0%; Pred. No. 9.9e-40;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPELTCGAEVLVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLRY 60
 Db 86 GPELTCGAEVLVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLRY 145
 Qy 61 CAPLKPAKSA 70
 Db 146 CAPLKPAKSA 155

RESULT 35
 US-09-340-250-41
 Sequence 41, Application US/09340250
 Patent No. 6083723
 GENERAL INFORMATION:
 APPLICANT: Tekamp-Olson, Patricia
 TITLE OF INVENTION: METHOD FOR EXPRESSION OF HETEROLOGOUS
 PROTEINS IN YEAST
 NUMBER OF SEQUENCES: 41
 CORRESPONDENCE ADDRESS:
 ADDRESSEE: Bell Seitzer IP Group of Alston & Bird, LLP
 STREET: 3605 Glenwood Ave. Suite 310
 CITY: Raleigh
 STATE: NC
 COUNTRY: US
 ZIP: 27622
 COMPUTER READABLE FORM:
 MEDIUM TYPE: Floppy disk
 COMPUTER: IBM PC compatible
 OPERATING SYSTEM: PC-DOS/MS-DOS
 SOFTWARE: PatentIn Release #1.0, Version #1.30
 CURRENT APPLICATION NUMBER: US/09/340,250
 FILING DATE:
 CLASSIFICATION:
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: 08/989,251
 FILING DATE:
 ATTORNEY/AGENT INFORMATION:
 NAME: Spruill, W. Murray
 REGISTRATION NUMBER: 32,943
 REFERENCE/DOCKET NUMBER: 5784-4
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: 919 420 2202
 TELEFAX: 919 881 3175
 INFORMATION FOR SEQ ID NO: 41:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 191 amino acids

```

;
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-09-340-250-41

Query Match 100.0%; Score 385; DB 3; Length 191;
Best Local Similarity 100.0%; Pred. No. 9.9e-40;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLREMY 60
Db 86 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLREMY 145

QY 61 CAPLKPAKSA 70
Db 146 CAPLKPAKSA 155

```

```

RESULT 36
US-09-528-108-41
; Sequence 41, Application US/09528108
; Patent No. 6312923
; GENERAL INFORMATION:
; APPLICANT: Tekamp-Olson, Patricia
; TITLE OF INVENTION: METHOD FOR EXPRESSION OF HETEROLOGOUS
; TITLE OF INVENTION: PROTEINS IN YEAST
; NUMBER OF SEQUENCES: 41
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Bell Selzer IP Group of Alston & Bird, LLP
; STREET: 3605 Glenwood Ave. Suite 310
; CITY: Raleigh
; STATE: NC
; COUNTRY: US
; ZIP: 27622
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent in Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/528,108
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/989,251
; FILING DATE:
; ATTORNEY/AGENT INFORMATION:
; NAME: Spruill, W. Murray
; REGISTRATION NUMBER: 32,943
; REFERENCE/DOCKET NUMBER: 5784-4
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 919 420 2202
; TELEFAX: 919 881 3175
; INFORMATION FOR SEQ ID NO: 41:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 191 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-09-528-108-41

Query Match 100.0%; Score 385; DB 4; Length 191;
Best Local Similarity 100.0%; Pred. No. 9.9e-40;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLREMY 60
Db 86 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLREMY 145

QY 61 CAPLKPAKSA 70
Db 146 CAPLKPAKSA 155

```

```

RESULT 37
US-09-255-829-14
; Sequence 14, Application US/09255829
; Patent No. 6461617
; GENERAL INFORMATION:
; APPLICANT: Shone, Clifford Charles
; APPLICANT: Quinn, Conrad Padraig
; APPLICANT: Foster, Keith Alan
; TITLE OF INVENTION: Recombinant Toxin Fragments
; NUMBER OF SEQUENCES: 29
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: STERNE, KESSLER, GOLDSTEIN, & FOX P.L.L.C.
; STREET: 1100 NEW YORK AVENUE, NW, SUITE 600
; CITY: WASHINGTON
; STATE: DC
; COUNTRY: USA
; ZIP: 20005-3934
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent in Release #1.0, Version #1.30 (EPO)
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/255,829
; FILING DATE: 23-FEB-1999
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: PCT/GB97/02273
; FILING DATE: 22-AUG-1997
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/782,893
; FILING DATE: 27-DEC-1996
; ATTORNEY/AGENT INFORMATION:
; NAME: ESMOND, ROBERT W.
; REGISTRATION NUMBER: 32,893
; REFERENCE/DOCKET NUMBER: 1581.0130002
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 202-371-2600
; TELEFAX: 202-371-2540
; INFORMATION FOR SEQ ID NO: 14:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 953 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-09-255-829-14

Query Match 100.0%; Score 385; DB 4; Length 953;
Best Local Similarity 100.0%; Pred. No. 5.8e-39;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```

```

QY 1 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLREMY 60
Db 882 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLREMY 941

QY 61 CAPLKPAKSA 70
Db 942 CAPLKPAKSA 951

RESULT 38
US-08-180-572-5
; Sequence 5, Application US/08180572
; Patent No. 5408041
; GENERAL INFORMATION:
; APPLICANT: Mundy, Gregory R
; APPLICANT: Gutierrez, Gloria E
; APPLICANT: Garrett, Ian R
; APPLICANT: Sabatini, Massimo
; APPLICANT: Izbicka, Elzbieta
; APPLICANT: Burgess, Wilson
; APPLICANT: Crumley, Gregg
; APPLICANT: Moore, Clarence

```

; TITLE OF INVENTION: Antler-Derived Bone Growth Factors
 ; NUMBER OF SEQUENCES: 22
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: Rhone-Poulenc Rorsz Legal Department
 ; STREET: 500 Arcola Road
 ; CITY: Collegeville
 ; STATE: PA
 ; COUNTRY: USA
 ; ZIP: 19426
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: Floppy disk
 ; OPERATING SYSTEM: IBM PC compatible
 ; SOFTWARE: Patent in Release #1.0, Version #1.25
 ; CURRENT APPLICATION DATA:
 ; APPLICATION NUMBER: US/08/180,572
 ; FILING DATE:
 ; CLASSIFICATION: 530
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: US 07/855,415
 ; ATTORNEY/AGENT INFORMATION:
 ; NAME: Goodman, Rosanne
 ; REGISTRATION NUMBER: 32,534
 ; REFERENCE/DOCKET NUMBER: A0880
 ; TELECOMMUNICATION INFORMATION:
 ; TELEPHONE: (215) 454-3817
 ; TELEFAX: (215) 454-3818
 ; INFORMATION FOR SEQ ID NO: 5:
 ; SEQUENCE CHARACTERISTICS:
 ; LENGTH: 70 amino acids
 ; TYPE: amino acid
 ; TOPOLOGY: linear
 ; MOLECULE TYPE: Peptide
 ; US-08-180-572-5

Query Match 99.2%; Score 382; DB 1; Length 70;
 Best Local Similarity 98.6%; Pred. No. 7.6e-40;
 Matches 69; Conservative 1; Mismatches 0; Indels 0; Gaps 0;
 Qy 1 GPEITCGAEIVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLEY 60
 Db 1 GPEITCGAEIVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLEY 60

RESULT 39
 US-09-142-583A-4
 ; Sequence 4, Application US/09142583A
 ; Patent No. 6221842
 ; GENERAL INFORMATION:
 ; APPLICANT: GOLDSPINK, GEOFFREY
 ; TITLE OF INVENTION: METHOD OF TREATING MUSCULAR DISORDERS
 ; NUMBER OF SEQUENCES: 11
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: NIXON & VANDERHUYE P.C.
 ; STREET: 1100 NORTH GLEBE ROAD
 ; CITY: ARLINGTON
 ; STATE: VA
 ; COUNTRY: USA
 ; ZIP: 22201
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: Floppy disk
 ; OPERATING SYSTEM: IBM PC compatible
 ; SOFTWARE: Patent in Release #1.0, Version #1.25
 ; CURRENT APPLICATION DATA:
 ; APPLICATION NUMBER: US/09/142,583A
 ; FILING DATE: 29-Oct-1998
 ; CLASSIFICATION: <Unknown>

; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: WO PCT/GB97/00658
 ; FILING DATE: 11-MAR-1997
 ; APLICATION NUMBER: GB 9605124.8
 ; FILING DATE: 11-MAR-1996
 ; ATTORNEY/AGENT INFORMATION:
 ; NAME: SADOFF, B. J.
 ; REGISTRATION NUMBER: 36663
 ; REFERENCE/DOCKET NUMBER: 117-263
 ; TELECOMMUNICATION INFORMATION:
 ; TELEPHONE: 7038164000
 ; TELEFAX: 7038164100
 ; INFORMATION FOR SEQ ID NO: 4:
 ; SEQUENCE CHARACTERISTICS:
 ; LENGTH: 121 amino acids
 ; TYPE: amino acid
 ; TOPOLOGY: linear
 ; MOLECULE TYPE: protein
 ; SEQUENCE DESCRIPTION: SEQ ID NO: 4:
 ; US-09-142-583A-4

Query Match 99.2%; Score 382; DB 3; Length 121;
 Best Local Similarity 98.6%; Pred. No. 1.4e-39;
 Matches 69; Conservative 1; Mismatches 0; Indels 0; Gaps 0;
 Qy 1 GPEITCGAEIVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLEY 60
 Db 11 GPEITCGAEIVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLEY 70

RESULT 40
 US-07-947-035-18
 ; Sequence 18, Application US/07947035
 ; Patent No. 5444045
 ; GENERAL INFORMATION:
 ; APPLICANT: Francis, Geoffrey L.
 ; APPLICANT: Wallon, Paul E.
 ; APPLICANT: Ballard, Francis J.
 ; APPLICANT: McWarty, John P.
 ; APPLICANT: Phelps, Patricia V.
 ; TITLE OF INVENTION: Method of Administering IGF-1, IGF-2,
 ; and Analogs Thereof to Birds
 ; NUMBER OF SEQUENCES: 18
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: Kenneth D. Sibley
 ; STREET: P.O. Drawer 34009
 ; CITY: Charlotte
 ; STATE: No. 5444045th Carolina
 ; COUNTRY: US
 ; ZIP: 28234
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: Floppy disk
 ; OPERATING SYSTEM: IBM PC compatible
 ; SOFTWARE: Patent in Release #1.0, Version #1.30
 ; CURRENT APPLICATION DATA:
 ; APPLICATION NUMBER: US/07/947,035
 ; FILING DATE: 17-SRP-1992
 ; CLASSIFICATION: 514
 ; ATTORNEY/AGENT INFORMATION:
 ; NAME: Sibley, Kenneth D.
 ; REGISTRATION NUMBER: 31,665
 ; REFERENCE/DOCKET NUMBER: 5175-59
 ; TELECOMMUNICATION INFORMATION:
 ; TELEPHONE: (919) 881-3140
 ; TELEFAX: (919) 881-3175
 ; TELEX: 575102
 ; INFORMATION FOR SEQ ID NO: 18:
 ; SEQUENCE CHARACTERISTICS:


```

; LENGTH: 83 amino acids
; TYPE: amino acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; HYPOTHEICAL: NO
US-07-947-035-18

```

```

Query Match          98.7%; Score 380; DB 1; Length 83;
Best Local Similarity 98.6%; Pred. No. 1.6e-39;
Matches 69; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

```

```

OY 1 GPEILCGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRELEMY 60
   ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 14 GPEILCGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRELEMY 73

```

```

OY 61 CAPLKPAKSA 70
   ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 74 CAPLKPAKSA 83

```

```

Search completed: February 25, 2004, 06:25:56
Job time : 18.8613 secs

```

GenCore version 5.1.6
Copyright (c) 1993 - 2004 CompuGen Ltd.

OM protein - protein search, using sw model

Run on: February 25, 2004, 06:17:27 ; Search time 51.0949 Seconds
(without alignments)
387.090 Million cell updates/sec

Title: US-10-066-009a-1
Perfect score: 385
Sequence: 1 GPEFLCGAELVDALQFVCGD.....SCDLRLEMYCAPLKPAKSA 70

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 1586107 seqs, 282547505 residues

Total number of hits satisfying chosen parameters: 1586107

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

- Database : A_Geneseq_29Jan04:*
1: geneseqp1980s:*
2: geneseqp1990s:*
3: geneseqp2000s:*
4: geneseqp2001s:*
5: geneseqp2002s:*
6: geneseqp2003as:*
7: geneseqp2003bs:*
8: geneseqp2004s:*

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Table with columns: Result No., Score, Match, Length, DB ID, Description. Contains 25 rows of search results.

Table with columns: ID, Score, Match, Length, Description. Contains 45 rows of alignment results.

ALIGNMENTS

RESULT 1
AAP40034
XX AAP40034 standard; protein; 70 AA.
AC AAP40034;
XX
XX
DT 25-MAR-2003 (revised)
DT 02-FEB-1992 (first entry)
DE Sequence of human insulin-like growth factor I (IGF-I).
XX
XX Yeast expression vector; somatic growth; growth promoter.
XX Homo sapiens.
OS
XX EP123228-A.
XX
XX 31-OCT-1984.
PD
XX
XX 13-APR-1984; 84EP-00104175.
XX
XX 25-APR-1983; 83US-00487950.
XX
XX (CHIR) CHIRON CORP.
PA
XX Barr PJ, Merryweath JP, Mullenbach G, Urdea MS;
XX
XX WPI; 1984-271223/44.
DR N-PSDB; AAN40026.
DR
XX
PT Prodn. of human insulin-like growth factors - by DNA recombinant method,
PT utilising yeast transformant.
XX
XX Disclosure; Page 23; 24pp; English.
PS
XX The inventors claim a DNA construct which comprises AAN40026 or AAN40027.
CC The DNA constructs are stably replicated in yeasts in which pre-
CC polypeptides form in high yield. The yeast cells are then able to process
CC the pre-forms to the mature IGF. (Updated on 25-MAR-2003 to correct PA
XX field.)
XX
XX Sequence 70 AA;
SQ
Query Match 100.0%; Score 385; DB 1; Length 70;
Best Local Similarity 100.0%; Pred. No. 2.8e-33;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 GPEFLCGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLEMY 60

Db 1 GPETLCAELVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLLEY 60
 Qy 61 CAPLKPAKSA 70
 Db 61 CAPLKPAKSA 70

RESULT 2
 AAP71539 standard; protein; 70 AA.
 ID AAP71539 standard; protein; 70 AA.
 AC AAP71539;
 XX
 DT 25-MAR-2003 (revised)
 DT 10-MAR-2003 (revised)
 DT 26-MAY-1991 (first entry)
 DE Sequence of human insulin-like growth factor I (IGF-I).
 DE Hormone; growth promoter.
 XX Homo sapiens.
 OS Homo sapiens.
 FH Key Location/Qualifiers
 FT Disulfide-bond 6..47
 FT Disulfide-bond 18..61
 FT Disulfide-bond 48..52
 XX JP62169733-A.
 XX 25-JUL-1987.
 XX 22-JAN-1986; 86JP-00011280.
 XX 22-JAN-1986; 86JP-00011280.
 PR (FUJI) FUJISAWA PHARM CO LTD.
 FA (FUJI) FUJISAWA PHARM CO LTD.
 XX WPI; 1987-246982/35.
 XX Human insulin-growth factor, which has a new prim. structure - is prepd.
 PT by oxidising reduced form IGF-I and treating the obtd. cpds. by e.g.
 PT chromatography, and is used for incorporating thymidine.
 XX Claim 2; Page 1; 6pp; Japanese.
 XX The IGF-I (and its salts) has strong effect for acceleration of thymidine
 CC incorporation into animal cells, suggesting that it has strong growth
 CC promoting effect. However it has no blood sugar lowering effect. (Updated
 CC on 10-MAR-2003 to add missing OS field.) (Updated on 25-MAR-2003 to
 CC correct PA field.)
 XX Sequence 70 AA;
 SQ Query Match 100.0%; Score 385; DB 1; Length 70;
 Best Local Similarity 100.0%; Pred. No. 2.8e-33;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPETLCAELVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLLEY 60
 Db 1 GPETLCAELVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLLEY 60
 Qy 61 CAPLKPAKSA 70
 Db 61 CAPLKPAKSA 70

RESULT 3
 AAP70414 standard; protein; 70 AA.
 ID AAP70414 standard; protein; 70 AA.
 XX AAP70414;
 AC AAP70414;

XX 25-MAR-2003 (revised)
 DT 19-FEB-1991 (first entry)
 XX Sequence of oxidative human insulin-like growth factor I (IGF-I) (A
 DE type).
 DE Hormone; sanatomedin.
 XX Homo sapiens.
 XX JP62190199-A.
 XX 20-AUG-1987.
 XX 14-FEB-1986; 86JP-00031512.
 XX 14-FEB-1986; 86JP-00031512.
 PR (FUJI) FUJISAWA PHARM CO LTD.
 PA (FUJI) FUJISAWA PHARM CO LTD.
 DR WPI; 1987-273817/39.
 XX Human insulin like growth factor I prodn. - by oxidising reductive human
 FT insulin-like growth factor.
 FT Claim 2; Page 935; 6pp; Japanese.
 CC The production of IGF-I-A by oxidising reductive human insulin-like
 CC growth factor in a buffer soln. and separating I-A from the reaction
 CC soln. is improved by the presence of an organic solvent which can
 CC dissolve in the buffer soln. in the reaction system. (Updated on 25-MAR-
 CC 2003 to correct PA field.)
 XX Sequence 70 AA;
 SQ Query Match 100.0%; Score 385; DB 1; Length 70;
 Best Local Similarity 100.0%; Pred. No. 2.8e-33;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPETLCAELVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLLEY 60
 Db 1 GPETLCAELVDALQVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLLEY 60
 Qy 61 CAPLKPAKSA 70
 Db 61 CAPLKPAKSA 70

RESULT 4
 AAP91502 standard; peptide; 70 AA.
 ID AAP91502 standard; peptide; 70 AA.
 XX AAP91502;
 XX 25-MAR-2003 (revised)
 DT 06-JUN-1990 (first entry)
 XX New insulin-like growth factor-1 (IGF-I) deriv.
 DE Insulin-like growth factor-I; IGF-I; derivative; disulphide bond;
 XX growth promoter; tissue repair.
 XX Unidentified.
 OS Unidentified.
 XX Key Location/Qualifiers
 FH Disulfide-bond 6 /note= "Bonded to Cys-47"
 FT Disulfide-bond 18 /note= "Bonded to Cys-61"
 FT Disulfide-bond 47 /note= "Bonded to Cys-6"
 FT Disulfide-bond 48

FT /note= "Bonded to Cys-52"
 FT Disulfide-bond 52
 FT /note= "Bonded to Cys-48"
 FT Disulfide-bond 61
 FT /note= "Bonded to Cys-18"
 FT Misc-difference 70
 FT /label= OTHER
 FT /note= "Ala-NH2 or Ala-OH"
 XX JP01066199-A.
 XX PN
 XX PD 13-MAR-1989.
 XX PF 04-SEP-1987; 87JP-00222735.
 XX PR 04-SEP-1987; 87JP-00222735.
 XX PA (SUMU) SUMITOMO SHIYAKU KK.
 XX WIPI; 1989-119491/16.
 XX PT New insulin-like growth factor-I deriv. - prepd. by applying oxidn. to
 PT specific peptide, used as medical compsn. for promoting growth or
 PT repairing tissue.
 XX PS Disclosure; Page 1; 8pp; Japanese.
 XX CC The deriv. or salt is produced by oxidation of the AAP91502. IGF-I deriv.
 CC has growth promotion action only. It is used as a medical compsn. for
 CC promoting growth or repairing tissue. (Updated on 25-MAR-2003 to correct
 CC PA field.)
 XX SQ Sequence 70 AA;

Query Match 100.0%; Score 385; DB 1; Length 70;
 Best Local Similarity 100.0%; Pred. No. 2.8e-33;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 Qy 1 GPETLGGAEVLVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLRLEMY 60
 Db 1 GPETLGGAEVLVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLRLEMY 60
 Qy 61 CAPLKPAKSA 70
 Db 61 CAPLKPAKSA 70

RESULT 5
 AAR36846
 ID AAR36846 standard; peptide; 70 AA.
 AC AAR36846;
 XX 25-MAR-2003 (revised)
 DT 02-SEP-1993 (first entry)
 DE Insulin-like growth factor-I.
 XX IGF-I; disorder; treatment; survival; retinal neuronal cells; promotion;
 KW injury; ageing; disease; photodegeneration; trauma; axotomy;
 KW neurotoxic-excitatory degeneration; diabetic retinopathy;
 KW ischemic neuronal degeneration; inherited retinal dystrophy;
 KW Alzheimer's disease; infantile malignant osteopetrosis; cholestasis;
 KW ceroid-lipofuscosis.
 XX Homo sapiens.
 OS W09308826-A1.
 XX PN 13-MAY-1993.
 PD 03-NOV-1992; 92WO-US009443.
 XX EF
 XX PT Prodn. of human IGF in unicellular host cells, used as a biologically

PR 08-NOV-1991; 91US-00790690.
 PR 15-OCT-1992; 92US-00963329.
 XX (CEPH-) CEPHALON INC.
 XX PI Bozyczko-Coyne D, Neff N, Lewis ME, Iqbal M;
 XX WIPI; 1993-167389/20.
 XX PT Use of IGF-I or IGF-II or their functional derivs. - for treating
 PT disorders characterised by death and/or dysfunction of retinal cells.
 XX PS Example; Page 50; 97pp; English.

XX CC The sequence is that of human insulin-like growth factor (IGF)-I which
 CC promotes the survival of retinal neuronal cells. It can be used for the
 CC treatment of retinal neuronal tissues which are suffering from the
 CC effects of injury, ageing and/or disease such as photodegeneration,
 CC trauma, axotomy, neurotoxic-excitatory degeneration, ischemic neuronal
 CC degeneration, inherited retinal dystrophy, diabetic retinopathy,
 CC Alzheimer's disease, infantile malignant osteopetrosis, ceroid
 CC lipofuscosis or cholestasis. (Updated on 25-MAR-2003 to correct PN
 CC field.)
 XX SQ Sequence 70 AA;

Query Match 100.0%; Score 385; DB 2; Length 70;
 Best Local Similarity 100.0%; Pred. No. 2.8e-33;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 Qy 1 GPETLGGAEVLVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLRLEMY 60
 Db 1 GPETLGGAEVLVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLRLEMY 60
 Qy 61 CAPLKPAKSA 70
 Db 61 CAPLKPAKSA 70

RESULT 6
 AAR41774
 ID AAR41774 standard; protein; 70 AA.
 AC AAR41774;
 XX 25-MAR-2003 (revised)
 DT 25-MAR-1994 (first entry)
 DE hIGF-I.
 XX Human; insulin-like growth factor; hIGF-I; reading frame;
 KW secretory signal; transcription; regulation; vector; host cell; yeast;
 KW IGF-II; "pre"-IGF.
 XX OS Homo sapiens.
 XX EP561137-A1.
 XX 22-SEP-1993.
 XX 13-APR-1984; 93EP-00101654.
 XX 25-APR-1983; 83US-00487950.
 PR 13-APR-1984; 84EP-00104175.
 XX (CHIR) CHIRON CORP.
 XX Barr PJ, Merryweather JP, Mullenbach G, Urdea MS;
 WIPI; 1993-296480/38.
 DR N-PSDB; AAQ48492.
 XX PT Prodn. of human IGF in unicellular host cells, used as a biologically

PT active medicament - by joining IGF genes to a secretory leader and
 PT processing signal sequences recognised by host then introducing vector
 PT into cells for growth.
 QX
 QX Claim 1; Page 20-21; 30pp; English.
 CC This sequence represents human insulin-like growth factor I (hIGF-I). The
 CC DNA encoding this sequence was joined in proper reading frame with a
 CC secretory leader and processing signal sequences recognised by host cells
 CC to form a structural gene downstream from and under the transcriptional
 CC regulatory control of a transcription initiation region in a vector
 CC compatible with the chosen host cells. The prepared vector may be used in
 CC the efficient production of hIGF-I by unicellular host cells, esp. yeast.
 CC Mature human IGF-I and IGF-II (see also AAR41775) produced in this manner
 CC may be used in medicaments. The synthetic coding sequence pref.
 CC containing host-preferred codons, is joined in the same reading frame to
 CC secretion and processing signals which allow "pre"-IGF to be secreted by
 CC the host. This facilitates purification. (Updated on 25-MAR-2003 to
 CC correct PN field.) (Updated on 25-MAR-2003 to correct PF field.) (Updated
 CC on 25-MAR-2003 to correct PR field.)
 QX
 SQ Sequence 70 AA;

Query Match 100.0%; Score 385; DB 2; Length 70;
 Best Local Similarity 100.0%; Pred. No. 2.8e-33;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 GPEITLGGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRLEMY 60
 Db 1 GPEITLGGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRLEMY 60

QY 61 CAPLXPAKSA 70
 Db 61 CAPLXPAKSA 70
 RESULT 7
 AAR43606
 ID AAR43606 standard; peptide; 70 AA.
 AC AAR43606;
 XX
 XX 25-MAR-2003 (revised)
 DT 10-MAY-1994 (first entry)
 DE Peptide derived from insulin-like growth factor.

XX IGF; IGF-II; neuronal cell survival; neurite regeneration; stroke;
 KW epilepsy; Parkinson's disease; head injury; spinal cord injury;
 KW age-related neuronal loss; amyotrophic lateral sclerosis; cyclic.
 XX
 XX Synthetic.
 OS
 XX WO9320836-A1.
 PN
 XX 28-OCT-1993.
 PD
 XX 14-APR-1993; 93WO-US003515.
 PF
 XX 15-APR-1992; 92US-00869913.
 PR 07-OCT-1992; 92US-00958903.
 XX
 XX (CEPH-) CEPHALON INC.
 PA
 XX Lewis ME, Kauer JC, Smith KR, Callison KV, Baldino F, Neff N;
 PI Iqbal M;
 PI WPI; 1993-351361/44.
 XX
 XX Peptide(s) derived from insulin-like growth factor - used for promoting
 PT neuronal cell survival and neurite regeneration, partic. in treating
 PT diseases e.g. stroke, epilepsy, Parkinson's, etc.
 PT
 XX

BS Disclosure; Page 81; 119pp; English.
 XX The sequence is that of a fragment of insulin-like growth factor II (IGF-
 CC II). The synthetic peptide can be used to enhance the survival of
 CC neuronal cells in a mammal that are at risk of dying or to treat a head
 CC or spinal cord injury, or to enhance neurite regeneration in a mammal, or
 CC to treat stroke, epilepsy, age-related neuronal loss, amyotrophic lateral
 CC sclerosis and Parkinson's disease. See also AAR43590-645. (Updated on 25-
 CC MAR-2003 to correct PN field.)
 XX
 SQ Sequence 70 AA;

Query Match 100.0%; Score 385; DB 2; Length 70;
 Best Local Similarity 100.0%; Pred. No. 2.8e-33;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 GPETLGGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRLEMY 60
 Db 1 GPETLGGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRLEMY 60

QY 61 CAPLXPAKSA 70
 Db 61 CAPLXPAKSA 70
 RESULT 8
 AAR55275
 ID AAR55275 standard; protein; 70 AA.
 AC AAR55275;
 XX
 XX 25-MAR-2003 (revised)
 DT 29-DEC-1994 (first entry)
 DE Sequence of insulin-like growth factor (IGF-1).
 XX
 XX Insulin-like growth factor; IGF-1; mutein; ss.
 XX Homo sapiens.
 OS
 XX WO9412219-A2.
 PN
 XX 09-JUN-1994.
 PD
 XX 24-NOV-1993; 93WO-US011458.
 PF
 XX 25-NOV-1992; 92US-00980519.
 PR (SYND) SYNERGEN INC.
 PA
 XX Cox GN, McDermott MJ;
 XX
 XX WPI; 1994-199978/24.
 DR

XX New polyethylene glycol conjugates of insulin-like growth factor muteins
 PT - including new muteins with a free cysteine in the N-terminal region.
 PT
 XX Disclosure; Page 8; 32pp; English.
 XX The IGF muteins of the invention are produced by modifying wt IGF, esp.
 CC at the N-terminus. The sequence of IGF-1 starting from the N-terminal
 CC end is given in AAR55275. In the examples, four muteins of IGF-1 were
 CC constructed. Three of the muteins replaced each of the first three AAs of
 CC IGF-1 with a Cys. These muteins are referred to as C1, C2 and C3
 CC respectively (AAQ65692, AAQ65693, AAQ65694). The fourth mutein introduced
 CC a Cys between the N-terminal Met and the first AA of IGF-1. This mutein
 CC is referred to as -1C (AAQ65691). (Updated on 25-MAR-2003 to correct PN
 CC field.)
 XX
 SQ Sequence 70 AA;

Query Match 100.0%; Score 385; DB 2; Length 70;
 Best Local Similarity 100.0%; Pred. No. 2.8e-33;

Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPETLCGAEALVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLLEY 60
 Db 1 GPETLCGAEALVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLLEY 60

QY 61 CAPLPAKSA 70
 Db 61 CAPLPAKSA 70

RESULT 9
 AAR48590
 ID AAR48590 standard; peptide; 70 AA.
 AC AAR48590;
 XX
 XX 25-MAR-2003 (revised)
 DT 15-AUG-1994 (first entry)
 XX
 DE Human IGF-I peptide 1-70.
 XX IGF-I; insulin-like growth factor-I; somatomedin-C.
 KW Homo sapiens.
 XX
 XX Key Location/Qualifiers
 FH Peptide 1..70
 FT /note= "1-70 region of human IGF-I"
 FT
 XX W09404569-A1.
 PN 03-MAR-1994.
 PD
 XX 20-AUG-1993; 93WO-GB001774.
 PF
 XX 20-AUG-1992; 92GB-00017696.
 PR
 XX (AGRI-) AGRIC & FOOD RES COUNCIL.
 PA
 PI Pell JM, Bates PC, Stewart EH;
 XX
 XX WPI; 1994-083113/10.
 DR
 XX Specific binding molecules which enhance insulin like growth factor-I
 PT activity - for use in treating or preventing conditions in which IGF-I is
 PT useful.
 XX
 XX Disclosure; Page 28; 103pp; English.
 PS
 XX
 XX Antibodies and other specific binding molecules which bind to insulin-
 CC like growth factor-I (IGF-I), particularly the 1-17, 18-21, 22-37, 45-53,
 CC 54-60 or, especially, the 36-44 region, potentiate or enhance IGF-I
 CC activity. (Updated on 25-MAR-2003 to correct PN field.)
 XX
 XX Sequence 70 AA;
 SQ
 Query Match 100.0%; Score 365; DB 2; Length 70;
 Best Local Similarity 100.0%; Pred. No. 2.8e-33;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPETLCGAEALVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLLEY 60
 Db 1 GPETLCGAEALVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLLEY 60

QY 61 CAPLPAKSA 70
 Db 61 CAPLPAKSA 70

RESULT 10
 AAR75657
 ID AAR75657 standard; protein; 70 AA.

XX AAR75657;
 AC
 XX 25-MAR-2003 (revised)
 DT 30-AUG-1995 (first entry)
 XX
 XX Human insulin-like growth factor I.
 DE Polycistronic gene; insulin-like growth factor I; IGF-I; cistron;
 KW protecting peptide; recombinant production.
 KW
 XX Homo sapiens.
 OS
 XX JP06319556-A.
 PN
 XX 22-NOV-1994.
 PD
 XX 11-SEP-1986; 93JP-00111559.
 PF
 XX 17-SEP-1985; 85GB-00022977.
 PR
 PR 11-SEP-1986; 86JP-00214736.
 XX
 XX (FUJI) FUJISAWA PHARM CO LTD.
 PA
 XX WPI; 1995-040316/06.
 DR
 XX Gene coding for human insulin-like growth factor I (IGF-I) fused to
 PT protecting peptide - for preparation of IGF-I.
 PT
 XX Disclosure; Page 2; 11pp; Japanese.
 PS
 XX A fusion protein (AAR66762) comprises a protecting peptide (AAR75658)
 CC which has a methionine residue as its C-terminal amino acid, fused to
 CC insulin-like growth factor I (IGF-I) via the methionine residue. The gene
 CC encoding the fusion protein may be used in the construction of expression
 CC vectors, which in turn can be used for the transformation of suitable
 CC microbial host cells. The polycistronic gene allows the efficient
 CC preparation of IGF-I. (Updated on 25-MAR-2003 to correct PF field.)
 CC (Updated on 25-MAR-2003 to correct PR field.)
 XX
 XX Sequence 70 AA;
 SQ
 Query Match 100.0%; Score 385; DB 2; Length 70;
 Best Local Similarity 100.0%; Pred. No. 2.8e-33;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPETLCGAEALVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLLEY 60
 Db 1 GPETLCGAEALVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLLEY 60

QY 61 CAPLPAKSA 70
 Db 61 CAPLPAKSA 70

RESULT 11
 AAR89949
 ID AAR89949 standard; protein; 70 AA.
 XX
 XX AAR89949;
 AC
 XX 20-APR-1996 (first entry)
 DT
 DE Recombinant insulin-like growth factor-1.
 DE
 XX Human; insulin-like growth factor-1; somatomedin-C; cloning;
 XX Escherichia coli; plasmid PER10088; vector; osteogenic;
 KW insulin-like growth factor binding protein-3; bone; osteoporosis;
 KW hypophosphataemia; hyperphosphataemia; diabetes mellitus;
 KW anorexia nervosa; cadmium poisoning; Paget disease; osteoarthritis;
 KW periodontal disease.
 XX
 XX Homo sapiens.
 OS

XX WO9602565-A1.
XX 01-FEB-1996.

XX 13-JUL-1995; 95WO-US0089225.
XX 20-JUL-1994; 94US-00278456.
XX (CELT-) CELTRIX PHARM INC.

XX Bagi CM, Brommage R, Rosen DM, Adams SM;
XX WPI; 1996-105855/11.

XX Stimulating bone formation using insulin-like growth factor-I and its
XX binding protein - for treating bone loss due to bone marrow disorders,
XX drug-related osteoporosis, periodontal disease, etc.

XX Example 3; Page 62-63; 97pp; English.

XX The sequence corresponds to human recombinant insulin-like growth factor-
XX 1 (somatomedin-C). The protein may be produced by expression in
XX Escherichia coli K-12 W3110, using plasmid pBR10088, a plasmid pU1003
XX derivative. The protein may be used along with insulin-like growth factor
XX binding protein-3 in an osteogenic composition to stimulate bone
XX formation in subjects with bone loss resulting from a bone marrow or
XX connective tissue disorder, drug-related osteoporosis, pregnancy,
XX lactation, chronic hypo- or hyperphosphataemia, diabetes mellitus,
XX anorexia nervosa, cadmium poisoning, juvenile osteoporosis, Paget
XX disease, periodontal disease or osteoarthritis

XX Sequence 70 AA;

XX Query Match 100.0%; Score 385; DB 2; Length 70;
XX Best Local Similarity 100.0%; Pred. NO. 2.8e-33;
XX Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQGTGIVDECCFRSCDLRRLLEY 60
Db 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQGTGIVDECCFRSCDLRRLLEY 60
Qy 61 CAPLKPAKSA 70
Db 61 CAPLKPAKSA 70

XX RESULT 12
XX AAR86874
XX ID AAR86874 standard; protein; 70 AA.

XX AC AAR86874;
XX DT 22-JUL-1996 (first entry)
XX DE Insulin like growth factor I.

XX Silkworm; Bombyx mori; nuclear polyhedrosis virus; polyhedron gene;
XX recombinant production; insulin like growth factor I; IGF-I.

XX Synthetic.
XX FN JP07289270-A.
XX PD 07-NOV-1995.

XX 14-NOV-1986; 95JP-00004621.
XX 14-NOV-1986; 95JP-00004621.
XX (DAUC) DALI CHI PHARM CO LTD.

XX WPI; 1996-015274/02.

DR N-PSDB; AAT07075.

XX Recombinant silkworm nuclear polyhedrosis virus contg. foreign gene -
XX useful for production of heterologous proteins in silkworms.

XX Example 1; Fig 13; 11pp; Japanese.

XX The present sequence is an insulin like growth factor I (IGF-I). A
XX plasmid carrying a 5'-upstream nucleotide sequence contg. a promoter,
XX part of, or the whole of the silkworm nuclear polyhedrosis virus (BmNPV)
XX structural polyhedron gene, the structural gene for a desired protein,
XX i.e. an IGF-I gene and a 3'-downstream nucleotide sequence contg. a BmNPV
XX terminator can be used to transfect a silkworm host, resulting in the
XX expression of the desired protein

XX Sequence 70 AA;

XX Query Match 100.0%; Score 385; DB 2; Length 70;
XX Best Local Similarity 100.0%; Pred. NO. 2.8e-33;
XX Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQGTGIVDECCFRSCDLRRLLEY 60
Db 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQGTGIVDECCFRSCDLRRLLEY 60
Qy 61 CAPLKPAKSA 70
Db 61 CAPLKPAKSA 70

XX RESULT 13
XX AAR87744

XX ID AAR87744 standard; protein; 70 AA.

XX AC AAR87744;

XX DT 26-JUN-1996 (first entry)

XX DE Wild type IGF-1 sequence.

XX Insulin-like growth factor-1; IGF-1; polyethylene glycol; PEG; triplate;
XX IGF-1/PEG conjugate; maleimide; sulphhydryl; thiol; tresylate; aziride;
XX exirane; 5-pyridyl; therapy; dwarfism; diabetes; periodontal disease;
XX osteoporosis.

XX Synthetic.

XX OS WO9532003-A1.

XX EN 30-NOV-1995.

XX PD 24-MAY-1995; 95WO-US006540.

XX PF 24-MAY-1994; 94US-00248273.

XX PR (AMGE-) AMGEN BOULDER INC.

XX PI Cox GN, McDermott MJ, Ko C;

XX WPI; 1996-020360/02.

XX Conjugates for treatment of, e.g. dwarfism, diabetes, or osteoporosis -
XX comprising polyethylene glycol attached to mutain of IGF at free
XX cysteine.

XX Disclosure; Page 8; 48pp; English.

XX This sequence represents the wild type insulin-like growth factor-1 (IGF-
XX 1) sequence. This sequence is modified to produce the muteins of the
XX invention (represented by AAR95832-R95844). The muteins created, contain
XX a non-native cysteine residue substituted for one of the first (or last)
XX four amino acid residues of this sequence. Polyethylene glycol (PEG)
XX conjugates are then created from the muteins, where the PEG is attached

CC to the non-native cysteine residue. The PEG is attached to the free
 CC cystein through an activating group selected from maleimide, sulphhydryl,
 CC thiol, triflate, tresylate, aziride, oxirane or 5-pyridyl. The conjugates
 CC can also comprise a second polypeptide attached to the PEG. The
 CC conjugates may be used for the treatment of IGF associated conditions,
 CC such as dwarfism, diabetes, periodontal disease or osteoporosis.
 CC Advantages associated with the conjugates are that they have a higher
 CC molecular weight, and an extended circulating half life in comparison to
 CC wild type IGF
 CC Sequence 70 AA;

Query Match 100.0%; Score 385; DB 2; Length 70;
 Best Local Similarity 100.0%; Pred. No. 2.8e-33;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPFTLCGAEIVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLLEY 60
 Db 1 GPFTLCGAEIVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLLEY 60

Qy 61 CAPLKPAKSA 70
 Db 61 CAPLKPAKSA 70

RESULT 14
 AAW33907
 ID AAW33907 standard; peptide; 70 AA.

XX AC AAW33907;
 XX DT 23-APR-1998 (first entry)

XX DE Peptide derived from human insulin-like growth factor-1 (IGF-1).
 XX KW Insulin-like growth factor; IGF; IGF-1; insulin; IGF-1 receptor;
 XX KW ligand inhibitor; IGF-1 analogue; IGF binding protein; IGFBP;
 XX KW IGF-responsive condition; IGF-I level.

XX OS Homo sapiens.
 XX PN WO9739032-A1.
 XX PD 23-OCT-1997.

XX PF 17-APR-1997; 97WO-US006503.
 XX PR 17-APR-1996; 96US-00633934.

XX PA (NEUR-) NEUROCRINE BIOSCIENCES INC.
 XX PI Behan D, Ling N, Liu X, Gaur A;

XX PS WPI; 1997-526402/48.
 XX PT Ligand inhibitor of insulin-like growth factor binding - used to increase
 XX PT level of free growth factor and treat growth factor-responsive
 XX PT conditions.

XX PS Disclosure; Page 19; 35pp; English.

CC The present sequence represents a peptide that is derived from human
 CC insulin-like growth factor-1 (IGF-1). IGFs are polypeptide hormones that
 CC are similar to insulin. IGF-1 mimics the action of insulin, and the IGF-1
 CC receptor has high homology to the insulin receptor. The peptide was used
 CC to create an analogue that acts as a ligand inhibitor. This ligand
 CC inhibitor (AAW33908) inhibits binding of IGF-1 to IGF binding protein
 CC (IGFBP). The ligand inhibitor is used to increase the level of free,
 CC biologically active IGF in a patient or to treat an IGF-responsive
 CC condition. The inhibitor is particularly used to increase IGF-I or IGF-II
 CC levels in the blood or brain, specifically for treating diabetes (insulin
 CC dependent or not), growth retardation, osteoporosis, human growth hormone
 CC (hGH) resistance, wounds, bone damage, amyotrophic lateral sclerosis,

CC Alzheimer's disease, demyelinating disease, multiple sclerosis, muscular
 CC dystrophy, stroke or neuronal degeneration
 CC Sequence 70 AA;

Query Match 100.0%; Score 385; DB 2; Length 70;
 Best Local Similarity 100.0%; Pred. No. 2.8e-33;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPFTLCGAEIVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLLEY 60
 Db 1 GPFTLCGAEIVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLLEY 60

Qy 61 CAPLKPAKSA 70
 Db 61 CAPLKPAKSA 70

RESULT 15
 AAW12342
 ID AAW12342 standard; protein; 70 AA.

XX AC AAW12342;
 XX DT 16-JUN-1997 (first entry)

XX DE Human mature insulin-like growth factor-I.

XX KW Insulin-like growth factor I; IGF-I; mitogen;
 XX KW insulin-like growth factor binding protein 3; IGFBP-3; protein refolding.
 XX OS Homo sapiens.

XX PN WO9640736-A1.
 XX PD 19-DEC-1996.

XX PF 30-MAY-1996; 96WO-US008113.
 XX PR 07-JUN-1995; 95US-00482271.

XX PA (CELT-) CELTRIX PHARM INC.
 XX PI Sommer A, Ogawa Y, Tao P;

XX PS WPI; 1997-099914/09.

XX PT Prepn. of complex of native insulin-like growth factor and binding
 XX PT protein - by denaturing, reducing and refolding, by oxidn. of both
 XX PT components together, to increase speed of refolding and improve yield.

XX PS Disclosure; Fig 1; 45pp; English.

CC Human insulin-like growth factor I (IGF-I) (AAW12342) is a known mitogen
 CC and growth factor which, when formulated with insulin-like growth factor
 CC binding protein 3 (IGFBP-3) (see also AAW12343-44), has greater effect
 CC when applied topically to wounds, or is free of hypoglycaemic activity
 CC when administered parenterally. IGF-I may be produced in transformed host
 CC cells, pref. E. coli, Opt. as a fusion protein with yeast ubiquitin (see
 CC also AAT59189). A complex of IGF-I and IGFBP-3 is formed by: denaturing a
 CC agent to form the complex. By co-folding IGF-I and IGFBP-3, significantly
 CC higher yields of both proteins in correctly folded form are achieved
 CC (almost 100% for IGF-I) and refolding is usually complete within 1-3 hr
 CC Sequence 70 AA;

Query Match 100.0%; Score 385; DB 2; Length 70;
 Best Local Similarity 100.0%; Pred. No. 2.8e-33;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPFTLCGAEIVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLLEY 60

Db 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSRRRAPQTGIVDECCFRSCDLRRLLEY 60
 QY 61 CAPLKPAKSA 70
 Db 61 CAPLKPAKSA 70

RESULT 16
 AAB09616
 ID AAB09616 standard; protein; 70 AA.
 AC AAB09616;
 DT 01-SEP-2000 (first entry)
 DE Insulin like growth factor 1 amino acid sequence - Fig 3.

XX Human; insulin like growth factor; IGF; IGFBP; binding domain;
 KW insulin like growth factor binding protein; diabetic complication;
 KW ischaemic injury; antagonist; modification; gene therapy; cytostatic;
 KW vasotrophic; antidiabetic; antiParkinsonian; neuroprotective; osteopathic;
 KW antiarthritic; vulnerary; tranquiliser; neurologic disease; head trauma;
 KW Parkinson's disease; amyotrophic lateral sclerosis; multiple sclerosis;
 KW osteoporosis; arthritis.
 XX Homo sapiens.
 OS
 PN WO200022469-A2.
 XX
 PD 27-APR-2000.
 XX
 PF 14-OCT-1999; 99WO-US023839.
 XX
 PR 16-OCT-1998; 98US-0104528P.
 XX
 PA (MUSC-) MUSC FOUND RES DEV.
 XX
 PI Rosenzweig SA, Horney MJ;
 XX
 DR WPI; 2000-339652/29.

XX New isolated peptide having an insulin-like growth factor domain of an
 PT insulin-like growth factor binding protein, useful for treating or
 PT preventing cancer or diabetic complications, or for treating ischemic
 PT injury.
 XX
 PS Disclosure; Fig 3; 106pp; English.

XX The present invention describes an isolated peptide (A) comprising an
 CC insulin like growth factor (IGF) binding domain of an IGF-binding protein
 CC (IGFBP) or its modification. (A) binds IGF with at least the same binding
 CC affinity as the full length IGFBP. A peptide from the present invention
 CC can have cytostatic, vasotropic, antidiabetic, antiParkinsonian,
 CC neuroprotective, osteopathic, antiarthritic, vulnerary and tranquiliser
 CC activities. The peptide is an IGF inhibitor, IGF antagonist and can be
 CC used in gene therapy. The peptide and antagonists from the present
 CC invention are useful for the treatment or prevention of cancer or
 CC diabetic complications, and for treating ischaemic injury. Other diseases
 CC or injuries that can be treated with the fragment or antagonist include
 CC neurologic diseases and injuries, e.g. Parkinson's disease, amyotrophic
 CC lateral sclerosis, head trauma or multiple sclerosis, osteoporosis or
 CC arthritis. The biotinylated IGF is useful in therapeutic assays for IGFBP
 CC and in screening for IGFBP-mimetics (e.g. IGF antagonists). AAB09616 to
 CC AAB09773 represent amino acid sequences used in the exemplification of
 CC the present invention
 XX
 SQ Sequence 70 AA;

Query Match 100.0%; Score 385; DB 3; Length 70;
 Best Local Similarity 100.0%; Pred. No. 2.8e-33;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSRRRAPQTGIVDECCFRSCDLRRLLEY 60
 QY 61 CAPLKPAKSA 70
 Db 61 CAPLKPAKSA 70

RESULT 17
 AAY88577
 ID AAY88577 standard; protein; 70 AA.
 AC AAY88577;
 DT 10-AUG-2000 (first entry)
 DE Native human insulin-like growth factor I (IGF-I) protein sequence.

XX Insulin-like growth factor; IGF-I; human; alleviate symptom; treatment;
 KW cancer; breast; prostate; colon; lung; alopecia; leukopaenia; mucositis;
 KW null IGF-I.
 XX Homo sapiens.
 OS
 PN WO200020023-A2.
 XX
 PD 13-APR-2000.
 XX
 PF 29-SEP-1999; 99WO-US022681.
 XX
 PR 02-OCT-1998; 98US-0102747P.
 PR 20-SEP-1999; 99US-00399120.
 XX
 PA (CELT-) CELTRIX PHARM INC.
 XX
 PI Mascarenhas D;
 XX
 DR WPI; 2000-303638/26.
 XX
 PT Treating cancers of the breast, lung and prostate using null insulin-like
 PT growth factor.
 XX
 PS Disclosure; Fig 1; 16pp; English.

XX This sequence represents the native human insulin-like growth factor-I
 CC (IGF-I) amino acid sequence. IGF-I mediates the effects of the growth
 CC hormones, and circulates with insulin-like growth factor binding protein-
 CC 3 (IGFBP-3). The administration of null IGF-I to a cancer patient, can be
 CC used as a method for alleviating the symptoms of cancer (or slowing the
 CC progression of cancer). In an example of the method, Y60L IGF-I is used
 CC as null IGF-I. The null IGF-I has reduced receptor binding affinity. The
 CC method is preferably used to treat breast, prostate, colon and/or lung
 CC cancer. The use of null IGF-I to treat cancer avoids the side effects
 CC associated with conventional chemotherapy such as alopecia, leukopaenia
 CC and mucositis
 XX
 SQ Sequence 70 AA;

Query Match 100.0%; Score 385; DB 3; Length 70;
 Best Local Similarity 100.0%; Pred. No. 2.8e-33;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 1 GPETLCGAELVDALQFVCGDRGFYFNKPTGYGSSRRRAPQTGIVDECCFRSCDLRRLLEY 60
 QY 61 CAPLKPAKSA 70
 Db 61 CAPLKPAKSA 70

RESULT 18
 AAY84871

ID AAY84871 standard; protein; 70 AA.
 AC AAY84871;
 XX 08-AUG-2000 (first entry)
 DT Amino acid sequence of native human insulin growth factor-1 (IGF-1).
 DE Insulin growth factor-1; IGF-1; non-thyroid disorder; IGFBP-3;
 XX Insulin-like growth factor binding protein; neurological disorder;
 KW thyroid axis agonist; IGF-dependent disorder; pulmonary disorder;
 KW growth disorder; gastrointestinal disorder; cancer cachexia;
 KW steroid-induced catabolism; bone disorder; reproductive disorder;
 KW haematopoietic disorder; glucose homeostasis.
 XX Homo sapiens.
 OS Homo sapiens.
 XX WO200020024-A2.
 PN 13-APR-2000.
 XX 29-SEP-1999; 99WO-US022761.
 XX 02-OCT-1998; 98US-0102790P.
 PR 20-SEP-1999; 99US-00399134.
 XX (CELT-) CELTRIX PHARM INC.
 PA Mascarenhas D;
 XX WPI; 2000-317646/27.
 DR Alleviating symptoms of non-thyroid disorders such as amyotrophic lateral
 XX sclerosis or autoimmune disease, comprises administration of insulin-like
 PT growth factor with thyroid axis agonist or antagonist.
 PT Disclosure; Fig 1; 22pp; English.
 PS The present sequence represents a human insulin growth factor-1 (IGF-1)
 CC protein. The specification describes a method for alleviating symptoms of
 CC a non-thyroid disorder which responds to IGF or insulin-like growth
 CC factor binding protein (IGFBP-3). The method comprises administering IGF
 CC or IGFBP-3 (as appropriate) with a thyroid axis agonist to a patient.
 CC Administration of a thyroid axis agonist IGF enhances the actions of IGF.
 CC Administration of a thyroid axis antagonist with IGFBP-3 enhances the
 CC anti-matotic and pro-apoptotic activities of IGFBP-3 to alleviate the
 CC symptoms of non-thyroid disorders. The methods are useful for alleviating
 CC the symptoms of non-thyroid disorders or an IGF-dependent disorder,
 CC neurological disorders, pulmonary disorders, growth disorders, recovery
 CC from bodily insults, gastrointestinal disorders, cancer cachexia, steroid
 CC induced catabolism, bone disorders, reproductive disorders,
 CC haematopoietic disorders, and disorders of glucose homeostasis
 XX Sequence 70 AA;
 XX Query Match 100.0%; Score 385; DB 3; Length 70;
 XX Best Local Similarity 100.0%; Pred. No. 2.8e-33;
 XX Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 GPETLCGAELVDALQFCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLLEY 60
 Db 1 GPETLCGAELVDALQFCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLLEY 60
 QY 61 CAPLKPAKSA 70
 Db 61 CAPLKPAKSA 70
 RESULT 19
 AAB12769
 ID AAB12769 standard; protein; 70 AA.
 XX AAB12769
 AC AAB12769;

XX 22-NOV-2000 (first entry)
 DT Human insulin-like growth factor 1 protein SEQ ID NO:1.
 DE Human; insulin-like growth factor 1; IGF-1; proinsulin; insulin; mutant;
 XX variant; insulin-like growth factor binding protein; IGFBP-1; IGFBP-3;
 XX antidiabetic; neuroprotective; anorectic; tranquiliser; vulnerary;
 KW anorectic; cardiac; nephrotropic; dermatological; antiHIV; antiviral;
 KW hyperglycaemia; obesity; lung disease; glomerulonephritis;
 KW interstitial nephritis; Turner's syndrome; Laron's syndrome;
 KW short stature; increased fat mass-to-lean ratio; immunological disorder;
 KW peripheral neuropathy; multiple sclerosis; muscular dystrophy;
 KW cataplectic state; trauma; wounding; infection; HIV; skin disorder;
 KW human immunodeficiency virus; diabetes; heart dysfunction;
 KW kidney disorder; whole body growth disorder.
 XX Homo sapiens.
 OS Homo sapiens.
 XX WO2000040612-A1.
 PN 13-JUL-2000.
 XX 05-JAN-2000; 2000WO-US000151.
 PF Novel insulin-like growth factor (IGF) 1 mutants that selectively bind to
 PR IGF binding protein (IGFBP)-1 or IGFBP-3, used to improve the half-lives
 XX of IGF-1 and insulin.
 XX Disclosure; Page 44; 48pp; English.
 PS The present invention describes an insulin-like growth factor (IGF)-1
 CC variant (I), where an amino acid at position 3, 4, 5, 7, 10, 14, 17, 23,
 CC 24, 25, 43, 49 or 63, optionally in combination with an amino acid at
 CC position 12 and/or 16 of the native human IGF-1 sequence, is replaced
 CC with an alanine, glycine, or a serine residue. The residue at position 7
 CC may be replaced by any amino acid. (I) can have antidiabetic, cardiant,
 CC neuroprotective, anorectic, tranquiliser, vulnerary, anorectic,
 CC nephrotropic, dermatological, antiHIV and antiviral activities. The IGF-1
 CC mutants are used in any methods where IGFs or insulin are used, e.g. in
 CC treating hyperglycaemia, obesity-related, neurological, cardiac, renal,
 CC immunological, and anabolic disorders. These disorders include lung
 CC diseases, glomerulonephritis, interstitial nephritis, Turner's syndrome,
 CC Laron's syndrome, short stature, increased fat mass-to-lean ratio,
 CC immunological disorders, peripheral neuropathy, multiple sclerosis,
 CC muscular dystrophy, catabolic states, trauma, wounding, infection, human
 CC immunodeficiency virus (HIV), wounds, skin disorders, diabetes, heart
 CC dysfunctions, kidney disorders, and whole body growth disorders. They can
 CC also be used for increasing serum and tissue levels of biological active
 CC IGF or insulin in a mammal. The IGF-1 mutants improve the half-lives of IGF-
 CC 1 and insulin. The present sequence represents the native human IGF-1
 CC protein sequence
 XX Sequence 70 AA;
 XX Query Match 100.0%; Score 385; DB 3; Length 70;
 XX Best Local Similarity 100.0%; Pred. No. 2.8e-33;
 XX Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 GPETLCGAELVDALQFCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLLEY 60
 Db 1 GPETLCGAELVDALQFCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLLEY 60
 QY 61 CAPLKPAKSA 70
 Db 61 CAPLKPAKSA 70
 RESULT 19
 AAB12769
 ID AAB12769 standard; protein; 70 AA.
 XX AAB12769
 AC AAB12769;

Db 61 CAPLKPAKSA 70

RESULT 20
 AAB12772
 ID AAB12772 standard; protein; 70 AA.
 XX
 AC AAB12772;
 AC
 DT 22-NOV-2000 (first entry)
 XX
 DE Human insulin-like growth factor 1 protein SEQ ID NO:1.
 XX
 KW Human; insulin-like growth factor 1; IGF-1; proinsulin; insulin; mutant;
 KW variant; cardiatic; nephrotropic; hepatotropic; anabolic; antidiabetic;
 KW hyperglycaemic disorder; renal disorder; hepatic failure;
 KW congestive heart failure; poor nutrition; wasting syndrome; IGFBP-1;
 KW insulin-like growth factor binding protein.
 OS Homo sapiens.
 XX
 XX WO200040613-A1.
 FN
 PD 13-JUL-2000.
 PD
 PF 05-JAN-2000; 2000WO-US000199.
 PF
 XX 06-JAN-1999; 99US-0115010P.
 FR
 PR 09-DEC-1999; 99US-0170261P.
 PR
 XX (GETH) GENENTECH INC.
 PA
 XX Dubaquié Y, Fielder FJ, Lowman HB, Mortensen DL;
 PI
 XX WPI; 2000-465956/40.
 DR
 XX Insulin-like growth factor (IGF) variants binding to IGF binding protein
 PT 1 and 3 (IGFBP-1 and 3), useful for the treatment of various disorders
 PT such as renal disorders and congestive heart failure.
 XX
 XX Disclosure; Page 56; 62pp; English.
 XX
 CC The present invention describes an insulin-like growth factor-1 (IGF-1)
 CC variant (1) where the amino acid at position 16, 25, or 49 or the amino
 CC acid residues at positions 3 and 49 of the native-sequence of human IGF-1
 CC are replaced with an alanine, a glycine or a serine residue. Also
 CC described are: (1) a method for treating a disorder characterised by
 CC dysregulation of the GH (growth hormone)/IGF axis in a mammal comprising
 CC administering (1); and (2) a kit for carrying out the method of (1). (1)
 CC can have cardiatic, nephrotropic, hepatotropic, anabolic and antidiabetic
 CC activities. The IGF-1 variant is useful for treating disorders such as a
 CC hyperglycaemic disorder, a renal disorder, congestive heart failure,
 CC hepatic failure, poor nutrition, a wasting syndrome, or a catabolic state
 CC where IGFBP-1 (IGF binding protein) levels are increased relative to the
 CC levels in a mammal without the disorder. The present sequence represents
 CC the native human IGF-1 protein sequence

SQ Sequence 70 AA;
 Query Match 100.0%; Score 385; DB 3; Length 70;
 Best Local Similarity 100.0%; Pred. No. 2.8e-33;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPETLCCGAEVLVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLEMY 60
 |||||
 Db 1 GPETLCCGAEVLVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLEMY 60
 |||||
 Qy 61 CAPLKPAKSA 70
 |||||
 Db 61 CAPLKPAKSA 70

RESULT 21
 AAB35949
 ID AAB35949 standard; protein; 70 AA.
 XX
 AC AAB35949;
 AC
 DT 26-FEB-2001 (first entry)
 XX
 DE IGF-1A amino acid sequence.
 XX
 KW Heparin binding; vascular graft; matrix; cell adhesion; growth factor;
 KW wound healing; dermal wound; wound healing; IGF-1A.
 XX
 OS Unidentified.
 XX
 XX WO200064481-A1.
 FN
 PD 02-NOV-2000.
 PD
 PF 22-APR-1999; 99WO-IB000800.
 PF
 XX 22-APR-1999; 99WO-IB000800.
 PR
 XX (ETHZ-) ETH ZURICH & UNIV ZURICH.
 FA
 XX Sakiyama SE, Hubbell JA;
 PI
 XX WPI; 2001-024627/03.
 DR
 XX Matrix for controlled release of growth factor for wound healing, has
 PT substrate that attaches heparin binding peptide, protein growth factor
 PT that bind heparin with low affinity, and heparin or heparin-like polymer.
 XX
 XX Example 5; Page 21; 48pp; English.
 XX
 CC This invention relates to a matrix comprising a substrate capable of
 CC providing attachment of a heparin binding peptide (HBP), a peptide
 CC comprising a binding domain which binds heparin with high affinity,
 CC heparin or heparin-like polymer, and a protein growth factor or peptide
 CC fragment which has a domain that binds heparin with low affinity.
 CC Included in the invention is a vascular graft comprising the matrix,
 CC which is capable of supporting cell adhesion. The matrix is used for
 CC delivering low heparin binding affinity growth factor proteins or
 CC peptides in a controlled manner suitable for wound healing. The matrix
 CC can be used in an article for treating dermal wounds, and in an
 CC implantable sterilized composition capable of supporting cell adhesion.
 CC The present sequence represents a growth factor protein. The protein is
 CC used in an example illustrating that non-heparin-binding growth factors
 CC can be released in a controlled manner from heparin-based drug delivery
 CC systems based on their low affinity for heparin

AAB35948
 ID AAB35948 standard; protein; 70 AA.
 XX
 AC AAB35948;
 AC
 DT 26-FEB-2001 (first entry)
 XX
 DE IGF-1A amino acid sequence.
 XX
 KW Heparin binding; vascular graft; matrix; cell adhesion; growth factor;
 KW wound healing; dermal wound; wound healing; IGF-1A.
 XX
 OS Unidentified.
 XX
 XX WO200064481-A1.
 FN
 PD 02-NOV-2000.
 PD
 PF 22-APR-1999; 99WO-IB000800.
 PF
 XX 22-APR-1999; 99WO-IB000800.
 PR
 XX (ETHZ-) ETH ZURICH & UNIV ZURICH.
 FA
 XX Sakiyama SE, Hubbell JA;
 PI
 XX WPI; 2001-024627/03.
 DR
 XX Matrix for controlled release of growth factor for wound healing, has
 PT substrate that attaches heparin binding peptide, protein growth factor
 PT that bind heparin with low affinity, and heparin or heparin-like polymer.
 XX
 XX Example 5; Page 21; 48pp; English.
 XX
 CC This invention relates to a matrix comprising a substrate capable of
 CC providing attachment of a heparin binding peptide (HBP), a peptide
 CC comprising a binding domain which binds heparin with high affinity,
 CC heparin or heparin-like polymer, and a protein growth factor or peptide
 CC fragment which has a domain that binds heparin with low affinity.
 CC Included in the invention is a vascular graft comprising the matrix,
 CC which is capable of supporting cell adhesion. The matrix is used for
 CC delivering low heparin binding affinity growth factor proteins or
 CC peptides in a controlled manner suitable for wound healing. The matrix
 CC can be used in an article for treating dermal wounds, and in an
 CC implantable sterilized composition capable of supporting cell adhesion.
 CC The present sequence represents a growth factor protein. The protein is
 CC used in an example illustrating that non-heparin-binding growth factors
 CC can be released in a controlled manner from heparin-based drug delivery
 CC systems based on their low affinity for heparin

SQ Sequence 70 AA;
 Query Match 100.0%; Score 385; DB 4; Length 70;
 Best Local Similarity 100.0%; Pred. No. 2.8e-33;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPETLCCGAEVLVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLEMY 60
 |||||
 Db 1 GPETLCCGAEVLVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLEMY 60
 |||||
 Qy 61 CAPLKPAKSA 70
 |||||
 Db 61 CAPLKPAKSA 70

RESULT 22
 AAB35949
 ID AAB35949 standard; protein; 70 AA.
 XX
 AC AAB35949;
 AC
 DT 26-FEB-2001 (first entry)
 XX

DE IGF-1B amino acid sequence.
 XX Heparin binding; vascular graft; matrix; cell adhesion; growth factor;
 KW wound healing; dermal wound; wound healing; IGF-1B.
 XX Unidentified.
 OS WO200064481-A1.
 XX 02-NOV-2000.
 XX 22-APR-1999; 99WO-IB000800.
 XX 22-APR-1999; 99WO-IB000800.
 XX (ETHZ-) ETH ZURICH & UNIV ZURICH.
 XX Sakiyama SE, Hubble JA;
 PI WPI; 2001-024627/03.
 DR Matrix for controlled release of growth factor for wound healing, has
 PT substrate that attaches heparin binding peptide, protein growth factor
 PT that bind heparin with low affinity, and heparin or heparin-like polymer.
 XX Example 5; Page 21; 48pp; English.
 XX This invention relates to a matrix comprising a substrate capable of
 CC providing attachment of a heparin binding peptide (HBP), a peptide
 CC comprising a binding domain which binds heparin with high affinity,
 CC heparin or heparin-like polymer, and a protein growth factor or peptide
 CC fragment which has a domain that binds heparin with low affinity.
 CC Included in the invention is a vascular graft comprising the matrix,
 CC which is capable of supporting cell adhesion. The matrix is used for
 CC delivering low heparin binding affinity growth factor proteins or
 CC peptides in a controlled manner suitable for wound healing. The matrix
 CC can be used in an article for treating dermal wounds, and in an
 CC implantable sterilized composition capable of supporting cell adhesion.
 CC The present sequence represents a growth factor protein. The protein is
 CC used in an example illustrating that non-heparin-binding growth factors
 CC can be released in a controlled manner from heparin-based drug delivery
 CC systems based on their low affinity for heparin
 XX
 SQ Sequence 70 AA;
 Query Match 100.0%; Score 385; DB 4; Length 70;
 Best Local Similarity 100.0%; Pred. No. 2.8e-33;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 GPETLCGAEIVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLEMY 60
 Db 1 GPETLCGAEIVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLEMY 60
 QY 61 CAPLKPAKSA 70
 Db 61 CAPLKPAKSA 70
 RESULT 23
 AAE18374
 ID AAE18374 standard; peptide; 70 AA.
 XX AAE18374;
 AC AAE18374;
 XX 07-MAY-2002 (first entry)
 DT Human mature insulin-like growth factor 1 (IGF-1).
 DE Human; bifunctional molecule; monoclonal antibody; gene therapy; cancer;
 XX vascular disorder; diabetic retinopathy; restenosis; ophthalmic disorder;
 KW hyperproliferative disorder; hormonal disorder; cytostatic; vasotropic;
 KW ophthalmological; insulin-like growth factor 1; IGF-1.
 XX

OS Homo sapiens.
 XX WO200204522-A2.
 XX 17-JAN-2002.
 XX 09-JUL-2001; 2001WO-EP007878.
 XX 10-JUL-2000; 2000US-00613017.
 XX (NOVS) NOVARTIS AG.
 PA (NOVS) NOVARTIS-ERFINDUNGEN VERW GES MBH.
 PA (SCRI) SCRIPPS RES INST.
 XX Nemerow GR, Li E;
 PI WPI; 2002-171707/22.
 DR New bifunctional molecules comprising an antibody or its antigen-binding
 XX portion, and a targeting agent, useful for e.g. gene therapy, or for
 PT promoting Adenoviral vector-mediated gene delivery to cells lacking av
 PT integrins.
 PT Claim 15; Page 97; 106pp; English.
 XX The present invention relates to a bifunctional molecule comprising an
 CC antibody or its antigen-binding portion, and a targeting agent where the
 CC antibody specifically binds to an antigen in a protein that binds to av
 CC integrin, and the targeting agent specifically binds to a cell surface
 CC protein that activates the phosphatidylinositol 3 (PI3K) signalling
 CC pathway. The bifunctional molecules are useful for gene therapy, for
 CC promoting Adenoviral (Ad) vector-mediated gene delivery to cells lacking
 CC av integrins, for enhancing Ad binding and internalisation, and in gene
 CC delivery of by fibreless adenovirus particles. The bifunctional molecules
 CC permit targeting of viral and bacterial vectors to cells that express
 CC targeted receptors. Diseases that can be targeted include cancers,
 CC vascular disorders, diabetic retinopathies, restenosis, ophthalmic
 CC disorders, hyperproliferative disorders, and hormonal disorders. The
 CC present sequence is human mature insulin-like growth factor 1 (IGF-1)
 CC which is used to generate fusion protein used in the invention
 XX
 SQ Sequence 70 AA;
 Query Match 100.0%; Score 385; DB 5; Length 70;
 Best Local Similarity 100.0%; Pred. No. 2.8e-33;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 GPETLCGAEIVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLEMY 60
 Db 1 GPETLCGAEIVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRLEMY 60
 QY 61 CAPLKPAKSA 70
 Db 61 CAPLKPAKSA 70
 RESULT 24
 AAM48217
 ID AAM48217 standard; protein; 70 AA.
 XX AAM48217;
 AC AAM48217;
 XX 18-MAR-2002 (first entry)
 DT Human insulin-like growth factor-1, IGF-1.
 DE Antirheumatic; antiarthritic; osteopathic; cartilage disorder;
 XX insulin-like growth factor; IGF; binding protein; IGFBP;
 KW rheumatoid arthritis; osteoarthritis; human.
 XX Homo sapiens.
 XX WO200187323-A2.
 PN

XX PD 22-NOV-2001.
XX PF 16-MAY-2001; 2001WO-US015904.
XX PR 16-MAY-2000; 2000US-0204450P.
XX FR 15-NOV-2000; 2000US-0248985P.
XX FA (GETH) GENENTECH INC.
XX PI Dubaque Y, Filvaroff EH, Lowman HB;
XX DR WPI; 2002-082942/11.
XX PR Treating cartilage disorders including cartilage damage by injury or
PT degenerative cartilaginous disorders, by contacting cartilage with
PT insulin-like growth factor analog with altered affinity for IGF-binding
PT proteins.
XX PS Disclosure; Fig 16; 136pp; English.
XX CC The present invention relates to a method for treating cartilage
CC disorders. The method comprises contacting cartilage with an active agent
CC such as insulin-like growth factor (IGF-1) analog with a binding affinity
CC preference for IGF binding protein-3 (IGFBP-3) over IGFBP-1, an IGF-1
CC analog with a binding affinity preference for IGFBP-1 over IGFBP-3, or a
CC IGFBP displacer peptide that prevents the interaction of IGF with an
CC IGFBP and does not bind to human IGF receptor. The method is useful for
CC treating cartilage disorders (CD), including degenerative CD, articular
CC CD such as rheumatoid arthritis and osteoarthritis. The present sequence
CC is human IGF-1, which was used to illustrate the invention
XX SQ Sequence 70 AA;
Query Match 100.0%; Score 385; DB 5; Length 70;
Best Local Similarity 100.0%; Pred. No. 2.8e-33;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Oy 1 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60
Db 1 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60
Oy 61 CAPLKPAKSA 70
Db 61 CAPLKPAKSA 70
RESULT 25
AAE27890
ID AAE27890 standard; protein; 70 AA.
AC AAE27890;
XX 27-DEC-2002 (first entry)
XX Human codon optimised insulin-like growth factor 1 (IGF).
XX Human; feed improvement; plant-derived feed; antibiotic; additive;
KW anti-microbial; poultry; insulin-like growth factor 1; flour; malt; IGF.
XX Homo sapiens.
OS Synthetic.
XX WO200263975-A2.
XX 22-AUG-2002.
XX 14-FEB-2002; 2002WO-US004919.
XX 14-FEB-2001; 2001US-0269188P.
XX 02-MAY-2001; 2001US-00847232.
XX (VENT-) VENTRIA BIOSCIENCE.

XX PI Huang N, Rodriguez RL, Hagie FE;
XX DR WPI; 2002-682708/73.
XX DR N-PSDB; AAD45352.
XX PR Improved feed for production animals, comprising plant-derived feed
PT ingredients, and seed composition containing flour, extract, or malt from
PT mature monocot seeds and heterologous seed-produced anti-microbial
PT proteins.
XX PS Disclosure; Fig 24; 175pp; English.
XX CC The invention relates to improved feed for production animals, comprising
CC one or more plant-derived feed ingredients, substantially un-supplemented
CC with small-molecule antibiotics and as an additive a seed composition
CC containing a flour, extract or malt obtained from mature monocot seeds
CC and one or more heterologous seed-produced anti-microbial proteins in
CC substantially unpurified form. The invention is useful as a feed for
CC production animals such as poultry and hoofed farm animals. The present
CC sequence is human codon optimised insulin-like growth factor 1 (IGF).
XX SQ Sequence 70 AA;
Query Match 100.0%; Score 385; DB 5; Length 70;
Best Local Similarity 100.0%; Pred. No. 2.8e-33;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Oy 1 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60
Db 1 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60
Oy 61 CAPLKPAKSA 70
Db 61 CAPLKPAKSA 70
RESULT 26
AAE28004
ID AAE28004 standard; protein; 70 AA.
AC AAE28004;
XX 13-DEC-2002 (first entry)
XX Human codon optimised insulin growth factor (IGF-1).
XX Human; plant-derived food; flour; malt; monocot seed; milk protein;
KW infant formula; insulin growth factor; IGF-1.
XX Homo sapiens.
OS Synthetic.
XX WO200264814-A2.
XX 22-AUG-2002.
XX 14-FEB-2002; 2002WO-US004921.
XX 14-FEB-2001; 2001US-0269199P.
XX 02-MAY-2001; 2001US-00847232.
XX (VENT-) VENTRIA BIOSCIENCE.
XX Huang N, Rodriguez RL, Hagie FE;
XX WPI; 2002-667011/71.
XX DR N-PSDB; AAD44954.
XX PR New nutritionally enhanced food compositions, useful for improving infant
PT formula, or supplementing or enhancing the diet of infants, particularly
PT very-low birth weight infants.

XX Example 6; Fig 24; 179pp; English.
 XX The invention relates to a nutritionally enhanced food comprising one or
 CC more plant-derived food ingredients, and as an additive, a seed
 CC composition containing a flour, extract, or malt obtained from mature
 CC monocot seeds and one or more seed-produced human milk proteins in
 CC substantially unpurified form. The nutritionally enhanced food and food
 CC additive compositions are useful for improving infant formula. Infant
 CC formulas containing the recombinant human milk proteins are useful in
 CC supplementing or enhancing the diet of infants, particularly very-low
 CC birth weight infants. The present sequence is human insulin growth factor
 CC (IGF-1) native DNA

XX Sequence 70 AA;
 SQ Query Match 100.0%; Score 385; DB 5; Length 70;
 XX Best Local Similarity 100.0%; Pred. No. 2.8e-33;
 XX Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPETLCGAEVLVDFVCGDRGFYFNKPTGYGSSRRAPQTGIYDECCFRSCDLRRLLEY 60
 DB 1 GPETLCGAEVLVDFVCGDRGFYFNKPTGYGSSRRAPQTGIYDECCFRSCDLRRLLEY 60

QY 61 CAPLKPAKSA 70
 DB 61 CAPLKPAKSA 70

RESULT 27
 AAB71497
 ID AAB71497 standard; protein; 70 AA.

XX AAB71497;
 AC AAB71497;
 XX DT 05-DEC-2002 (first entry)
 XX DE Human IGF-1 protein fragment.
 XX IGF-1; insulin; human; crystal structure; antidiabetic; anorectic;
 KW insulin-like growth factor; cardiant; anti-HIV; immunostimulant; AIDS;
 KW IGF-1 receptor-binding region; diabetes; obesity; heart dysfunction;
 KW acquired immunodeficiency syndrome; wasting; kidney disorder; necrosis;
 KW neurological disorder; whole body growth disorder; Turner's syndrome;
 KW immunological disorder; insulin resistance; protein coordinate data.
 XX Homo sapiens.

XX Key Location/Qualifiers
 FH 1..28
 FT Region /label= A_chain
 FT Binding-site 3 /note= "IGFBP-1 and IGFBP-3 binding site"
 FT Binding-site 5 /note= "IGFBP-1 and IGFBP-3 binding site"
 FT Binding-site 7 /note= "IGFBP-1 and IGFBP-3 binding site"
 FT Binding-site 11 /note= "IGFBP-1 and IGFBP-3 binding site"
 FT Binding-site 17 /note= "IGFBP-1 and IGFBP-3 binding site"
 FT Binding-site 18 /note= "IGFBP-1 and IGFBP-3 binding site"
 FT Binding-site 26 /note= "IGFBP-1 and IGFBP-3 binding site"
 FT Binding-site 27 /note= "IGF-1 receptor binding site"
 FT Binding-site 29..41 /note= "IGFBP-1 and IGFBP-3 binding site"
 FT Binding-site 30 /label= B_chain
 FT Binding-site 32 /note= "IGF-1 receptor binding site"
 FT Binding-site /note= "IGF-1 receptor binding site"

FT Region 42..62
 FT /label= C_chain
 FT Binding-site 50
 FT Binding-site 60 /note= "IGFBP-1 and IGFBP-3 binding site"
 FT Region 63..70 /note= "IGF-1 receptor binding site"
 FT Binding-site 63 /label= D_region
 FT Binding-site 63 /note= "IGFBP-1 and IGFBP-3 binding site"
 PN W0200264627-A2.
 XX 22-AUG-2002.
 XX 01-FEB-2002; 2002WO-US003156.
 XX 09-FEB-2001; 2001US-0267977P.
 PR 27-APR-2001; 2001US-0287072P.
 XX (GETH) GENENTECH INC.
 PA Schaffer M, Ultsch M, Vajdos F;
 PI WPI; 2002-723170/78.

DR Crystal formed by insulin-like growth factor-1, IGF-1, useful for
 XX treating agonist disorders, diffracts x-ray radiation to produce a
 FT diffraction pattern representing the three-dimensional structure of IGF-
 FT 1.
 XX Example 1; Fig 1; 67pp; English.
 PS This invention describes a novel crystal formed by insulin-like growth
 XX factor-1 (IGF-1) that diffracts x-ray radiation to produce a diffraction
 CC pattern representing the three-dimensional structure of IGF-1. The
 CC products of the invention have antidiabetic, anorectic, cardiant, anti-
 CC HIV and immunostimulant activity. The novel crystal includes an IGF-1
 CC receptor-binding region, useful for identifying compounds having
 CC structures that interact with the receptor-binding region of the 3-D
 CC structure of IGF-1 and function as an IGF-1 agonist or antagonist.
 CC Compositions utilizing the novel crystal structure are useful for
 CC treating a mammal, especially human suffering from a disorder such as
 CC diabetes, obesity, heart dysfunction, acquired immunodeficiency syndrome
 CC (AIDS)-related wasting, kidney disorder, neurological disorder, whole
 CC body growth disorder, immunological disorders, Turner's syndrome, insulin
 CC resistance and necrosis. Crystalline IGF-1 is useful for computationally
 CC or experimentally evaluating a chemical entity to obtain information
 CC about its association with a binding site of IGF-1, for designing
 CC chemical entities that bind to or associate with IGF-1, and for altering
 CC physical properties of the chemical entities in different ways and for
 CC solving the crystal structures of mutants, co-complexes, or crystalline
 CC form of any other molecule homologous to or capable of associating with a
 CC portion of IGF-1. Peptidomimetics containing the crystal structure are
 CC useful for designing a compound that mimics the 3-dimensional surface
 CC structure of IGF-1. The crystal is useful as a standard or control in a
 CC diagnosing setting, for e.g. as a molecular weight marker or ELISA,
 CC radioassay, radioreceptor assay control and studying binding properties
 CC of IGF-1, IGFBPs and IGF-1 receptors. This sequence represents the human
 CC IGF-1 protein fragment described in the disclosure of the invention

XX Sequence 70 AA;
 SQ Query Match 100.0%; Score 385; DB 5; Length 70;
 XX Best Local Similarity 100.0%; Pred. No. 2.8e-33;
 XX Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPETLCGAEVLVDFVCGDRGFYFNKPTGYGSSRRAPQTGIYDECCFRSCDLRRLLEY 60
 DB 1 GPETLCGAEVLVDFVCGDRGFYFNKPTGYGSSRRAPQTGIYDECCFRSCDLRRLLEY 60

QY 61 CAPLKPAKSA 70
 DB 61 CAPLKPAKSA 70

Db 61 CAPLKPAKSA 70

RESULT 29
AAU90781
ID AAG76349 standard; protein; 70 AA.
XX ABG76349;
AC ABG76349;
XX
DT 10-MAY-2003 (first entry)
XX
DE Human full length mature IGF-1 protein.
XX
KW Human; bifunctional molecule; antigen-binding portion; alpha integrin;
KW cell surface protein; phosphatidylinositol-3-OH kinase; PI3K;
KW signalling pathway; targeted gene therapy; delivery vector;
KW adenoviral gene delivery particle; viral infection; cancer;
KW rheumatoid arthritis; cardiovascular disorder; diabetic retinopathy;
KW restenosis; ophthalmic disorder; hyperproliferative disorder;
KW hormonal disorder; virucide; antiinflammatory; antiarthritis;
KW antiarthritic; ophthalmological; DAV-1 antibody; IGF-1;
KW insulin-like growth factor-1.
XX
OS Homo sapiens.
XX
FN US2002164333-A1.
XX
XX
PD 07-NOV-2002.
XX
XX 10-JUL-2001; 2001US-00903327.
XX
XX 10-JUL-2000; 2000US-00613017.
XX
PR 10-JUL-2000; 2000US-0325781P.
XX
XX (SCRI) SCRIPPS RES INST.
XX
XX Nemerow GR, Li E;
PI
XX
DR WPI; 2002-171707/22.
XX
XX New bifunctional molecules comprising an antibody or its antigen-binding
XX portion, and a targeting agent, useful for e.g. gene therapy, or for
XX promoting Adenoviral vector-mediated gene delivery to cells lacking av
XX integrins.
XX
XX Example 2; Page 37; 49pp; English.
XX
XX The present invention relates to a bifunctional molecule comprising an
XX antibody or its antigen-binding portion, and a targeting agent. The
XX antibody specifically binds to an antigen in a protein that binds to
XX alpha integrin, and the targeting agent specifically binds to a cell
XX surface protein that activates the phosphatidylinositol-3-OH kinase
XX (PI3K) signalling pathway. The bifunctional molecules are useful for
XX targeted gene therapy using targeting delivery vectors, such as
XX adenoviral gene delivery particles. The bifunctional molecules are useful
XX for treating viral infections, rheumatoid arthritis, cancers, ophthalmic
XX cardiovascular disorders, diabetic retinopathies, restenosis, ophthalmic
XX disorders, hyperproliferative disorders, and hormonal disorders. The
XX present sequence represents mature human insulin-like growth factor-1
XX (IGF-1). It is used to prepare a fusion protein with mouse DAV-1 antibody
XX
XX Sequence 70 AA;
SQ
Query Match 100.0%; Score 385; DB 5; Length 70;
Best Local Similarity 100.0%; Pred. No. 2.8e-33;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 61 CAPLKPAKSA 70

RESULT 29
AAU90781
ID AAG76349 standard; protein; 70 AA.
XX ABG76349;
AC ABG76349;
XX
DT 10-MAY-2003 (first entry)
XX
DE Human full length mature IGF-1 protein.
XX
KW Human; bifunctional molecule; antigen-binding portion; alpha integrin;
KW cell surface protein; phosphatidylinositol-3-OH kinase; PI3K;
KW signalling pathway; targeted gene therapy; delivery vector;
KW adenoviral gene delivery particle; viral infection; cancer;
KW rheumatoid arthritis; cardiovascular disorder; diabetic retinopathy;
KW restenosis; ophthalmic disorder; hyperproliferative disorder;
KW hormonal disorder; virucide; antiinflammatory; antiarthritis;
KW antiarthritic; ophthalmological; DAV-1 antibody; IGF-1;
KW insulin-like growth factor-1.
XX
OS Homo sapiens.
XX
FN US2002164333-A1.
XX
XX
PD 07-NOV-2002.
XX
XX 10-JUL-2001; 2001US-00903327.
XX
XX 10-JUL-2000; 2000US-00613017.
XX
PR 10-JUL-2000; 2000US-0325781P.
XX
XX (SCRI) SCRIPPS RES INST.
XX
XX Nemerow GR, Li E;
PI
XX
DR WPI; 2002-171707/22.
XX
XX New bifunctional molecules comprising an antibody or its antigen-binding
XX portion, and a targeting agent, useful for e.g. gene therapy, or for
XX promoting Adenoviral vector-mediated gene delivery to cells lacking av
XX integrins.
XX
XX Example 2; Page 37; 49pp; English.
XX
XX The present invention relates to a bifunctional molecule comprising an
XX antibody or its antigen-binding portion, and a targeting agent. The
XX antibody specifically binds to an antigen in a protein that binds to
XX alpha integrin, and the targeting agent specifically binds to a cell
XX surface protein that activates the phosphatidylinositol-3-OH kinase
XX (PI3K) signalling pathway. The bifunctional molecules are useful for
XX targeted gene therapy using targeting delivery vectors, such as
XX adenoviral gene delivery particles. The bifunctional molecules are useful
XX for treating viral infections, rheumatoid arthritis, cancers, ophthalmic
XX cardiovascular disorders, diabetic retinopathies, restenosis, ophthalmic
XX disorders, hyperproliferative disorders, and hormonal disorders. The
XX present sequence represents mature human insulin-like growth factor-1
XX (IGF-1). It is used to prepare a fusion protein with mouse DAV-1 antibody
XX
XX Sequence 70 AA;
SQ
Query Match 100.0%; Score 385; DB 5; Length 70;
Best Local Similarity 100.0%; Pred. No. 2.8e-33;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Db 61 CAPLKPAKSA 70

RESULT 29
AAU90781
ID AAG76349 standard; protein; 70 AA.
XX ABG76349;
AC ABG76349;
XX
DT 10-MAY-2003 (first entry)
XX
DE Human full length mature IGF-1 protein.
XX
KW Human; bifunctional molecule; antigen-binding portion; alpha integrin;
KW cell surface protein; phosphatidylinositol-3-OH kinase; PI3K;
KW signalling pathway; targeted gene therapy; delivery vector;
KW adenoviral gene delivery particle; viral infection; cancer;
KW rheumatoid arthritis; cardiovascular disorder; diabetic retinopathy;
KW restenosis; ophthalmic disorder; hyperproliferative disorder;
KW hormonal disorder; virucide; antiinflammatory; antiarthritis;
KW antiarthritic; ophthalmological; DAV-1 antibody; IGF-1;
KW insulin-like growth factor-1.
XX
OS Homo sapiens.
XX
FN US2002164333-A1.
XX
XX
PD 07-NOV-2002.
XX
XX 10-JUL-2001; 2001US-00903327.
XX
XX 10-JUL-2000; 2000US-00613017.
XX
PR 10-JUL-2000; 2000US-0325781P.
XX
XX (SCRI) SCRIPPS RES INST.
XX
XX Nemerow GR, Li E;
PI
XX
DR WPI; 2002-171707/22.
XX
XX New bifunctional molecules comprising an antibody or its antigen-binding
XX portion, and a targeting agent, useful for e.g. gene therapy, or for
XX promoting Adenoviral vector-mediated gene delivery to cells lacking av
XX integrins.
XX
XX Example 2; Page 37; 49pp; English.
XX
XX The present invention relates to a bifunctional molecule comprising an
XX antibody or its antigen-binding portion, and a targeting agent. The
XX antibody specifically binds to an antigen in a protein that binds to
XX alpha integrin, and the targeting agent specifically binds to a cell
XX surface protein that activates the phosphatidylinositol-3-OH kinase
XX (PI3K) signalling pathway. The bifunctional molecules are useful for
XX targeted gene therapy using targeting delivery vectors, such as
XX adenoviral gene delivery particles. The bifunctional molecules are useful
XX for treating viral infections, rheumatoid arthritis, cancers, ophthalmic
XX cardiovascular disorders, diabetic retinopathies, restenosis, ophthalmic
XX disorders, hyperproliferative disorders, and hormonal disorders. The
XX present sequence represents mature human insulin-like growth factor-1
XX (IGF-1). It is used to prepare a fusion protein with mouse DAV-1 antibody
XX
XX Sequence 70 AA;
SQ
Query Match 100.0%; Score 385; DB 5; Length 70;
Best Local Similarity 100.0%; Pred. No. 2.8e-33;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

RESULT 30
 AAO16314
 ID AAO16314 standard; protein; 70 AA.
 AC
 XX AAO16314;
 DT 20-MAR-2003 (first entry)
 DE Insulin-like growth factor I (IGF-I) protein.
 XX Crystal; X-ray diffraction; IGF-I; IGFBP; insulin-like growth factor;
 KW insulin-like growth factor binding protein.
 XX Unidentified.
 OS
 PN WC200298914-A2.
 XX
 PD 12-DEC-2002.
 XX
 XX 05-JUN-2002; 2002WO-EF006161.
 XX
 PR 07-JUN-2001; 2001EP-00112958.
 XX
 PA (HOFF) HOFFMANN LA ROCHE & CO AG F.
 XX
 PI Beisel H, Demuth D, Engh R, Holak T, Huber R, Lang K;
 PI Schumacher R, Zeslawski W;
 XX
 DR WPI; 2003-140589/13.
 XX
 PT New crystal comprising a complex of insulin-like growth factor IGF I or
 PT II and a polypeptide, useful for X-ray diffraction.
 XX
 PS Disclosure; Fig 1A; 71pp; English.
 XX
 CC The invention comprises a crystal for X-ray diffraction, the crystal is a
 CC complex of insulin-like growth factor (IGF) I or II and a region of an
 CC insulin-like growth factor binding protein (IGFBP). The crystal of the
 CC invention is useful for X-ray diffraction. The present amino acid
 CC sequence represents an IGF-I protein
 XX
 SQ Sequence 70 AA;
 Query Match 100.0%; Score 385; DB 6; Length 70;
 Best Local Similarity 100.0%; Pred. No. 2.8e-33;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 GPETLCGAEIVDALQVCGDRGFGYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLEY 60
 Db 1 GPETLCGAEIVDALQVCGDRGFGYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLEY 60
 QY 61 CAPLKPAKSA 70
 Db 61 CAPLKPAKSA 70
 RESULT 31
 AAP50872
 ID AAP50872 standard; protein; 71 AA.
 AC
 XX AAP50872;
 DT 10-DEC-1991 (first entry)
 DE Synthetic human insulin-like growth factor.
 XX
 KW Insulin-like growth factor; hormones; recombinant plasmid; ss.
 XX
 OS Synthetic.
 XX
 PN EP130166-A.
 XX
 PD 02-JAN-1985.

XX 20-JUN-1984; 84EP-00650197.
 XX 23-JUN-1983; 83SE-00003626.
 PR
 XX (KABI) KABIGEN AB.
 PA
 XX Elmlad A, Palm G, Josephson S, Heden LO, Holmgren E;
 PI
 XX WPI; 1985-008094/02.
 DR
 DR N-PSDB; AAN50536.
 XX
 PT Prodn. of human insulin-like growth factor - by cultivation of
 PT transformant microorganism including recombinant plasmid.
 XX
 PS Disclosure; Fig 1; 44pp; English.
 XX
 CC The IGF-1 can be obtained easily and in appreciable amounts for use in
 CC the production of antibodies and in biological studies, etc. See also
 CC AAN50537-39 and AAP50873
 XX
 SQ Sequence 71 AA;
 Query Match 100.0%; Score 385; DB 1; Length 71;
 Best Local Similarity 100.0%; Pred. No. 2.8e-33;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 GPETLCGAEIVDALQVCGDRGFGYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLEY 60
 Db 2 GPETLCGAEIVDALQVCGDRGFGYFNKPTGYGSSRRAPQTGIVDECCFRSCLRLRLEY 61
 QY 61 CAPLKPAKSA 70
 Db 62 CAPLKPAKSA 71
 RESULT 32
 AAP81203
 ID AAP81203 standard; protein; 71 AA.
 XX
 AC AAP81203;
 XX
 DT 03-DEC-1990 (first entry)
 DE Synthetic human insulin growth factor (h-IGF).
 XX
 KW human insulin growth factor (h-IGF); pCMV-bGHb;
 KW cytomegalovirus immediate early promoter.
 XX
 OS Synthetic.
 XX
 PN EP266057-A.
 XX
 PD 04-MAY-1988.
 XX
 PF 25-SEP-1987; 87EP-00308484.
 XX
 PR 01-OCT-1986; 86US-00913909.
 XX
 PA (MERI) MERCK & CO INC.
 XX
 PI Bayne ML, Kopchick JJ;
 XX
 DR WPI; 1988-121149/18.
 DR N-PSDB; AAN81557.
 XX
 PT Plasmids contg. cytomegalovirus immediate early promoter - used to
 PT express and secrete mammalian proteins in biologically active form.
 XX
 PS Disclosure; Page ?; 15pp; English.
 XX
 CC h-IGF can be expressed by transformant mouse fibroblasts carrying a
 CC plasmid in which the synthetic gene is placed under the control of

CC cytomegalovirus immediate early (CMV-IE) promoter. The protein is secreted into the culture medium in biologically active form without the need for any additional biological or chemical processing

XX Sequence 71 AA;

Query Match 100.0%; Score 385; DB 1; Length 71;
 Best Local Similarity 100.0%; Pred. No. 2.8e-33;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 GPETLCGAEIYDVALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRY 60
 Db 2 GPETLCGAEIYDVALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRY 61

OY 61 CAPLKPAKSA 70
 Db 62 CAPLKPAKSA 71

RESULT 33
 AAR05281 standard; protein; 71 AA.
 AC AAR05281;
 XX 25-MAR-2003 (revised)
 DT 18-AUG-1990 (first entry)
 XX Amino acid sequence of Insulin-like growth factor encoded by synthetic gene.
 XX Insulin growth factor 1 analogue; somatomedin-C.
 OS Homo sapiens.
 XX US4888286-A.
 XX 19-DEC-1989.
 XX 24-MAR-1987; 87US-00030244.
 XX 06-FEB-1984; 84US-00577130.
 XX (CREA-) CREATIVE BIOMOLECULES INC.
 XX Crea R;
 XX WPI; 1990-058374/08.
 DR N-PSDB; AAQ03403.
 XX Altering sequence of native double stranded DNA of structural genes - to produce hybrid gene, including synthetic oligo-nucleotide cassette, e.g. encoding human pancreatic growth hormone-releasing factor.
 XX Disclosure; Fig 2; 10pp; English.
 XX The method of producing its DNA is claimed. It can be used as a drug, an enzyme and a synthetic vaccine. (Updated on 25-MAR-2003 to correct PF field.) (Updated on 25-MAR-2003 to correct PR field.) (Updated on 25-MAR-2003 to correct PA field.)

Query Match 100.0%; Score 385; DB 2; Length 71;
 Best Local Similarity 100.0%; Pred. No. 2.8e-33;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 GPETLCGAEIYDVALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRY 60
 Db 2 GPETLCGAEIYDVALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRY 61

OY 61 CAPLKPAKSA 70
 Db 62 CAPLKPAKSA 70

Db 62 CAPLKPAKSA 71

RESULT 34
 AAR21709 standard; protein; 71 AA.
 XX AAR21709;
 AC AAR21709;
 XX 25-MAR-2003 (revised)
 DT 17-AUG-1992 (first entry)
 XX Insulin-like Growth Factor-1.
 XX Insulin-like growth factor-1; alpha-mating factor; prepro; region;
 KW Pichia pastoris; yeast; site-directed mutagenesis; spacer.
 XX Synthetic.
 XX WO9204363-A.
 XX 19-MAR-1992.
 XX 04-SEP-1991; 91WO-US006452.
 XX 04-SEP-1990; 90US-00578728.
 XX (SALK) SALK INST BIOTECHNOLOGY IND AS.
 XX Brierley RA, Davis GR, Gleeson MA, Howard BD;
 XX WPI; 1992-114289/14.
 DR N-PSDB; AAQ23303.
 XX Prodn. of insulin-like growth factor 1 - using DNA constructs in methylothrophic yeast cells.
 XX Disclosure; Fig 1; 100pp; English.
 XX Authentically folded, biologically active IGF-1 can be produced by transformant yeast. Expression of the IGF-1 coding sequence is controlled by a promoter from a methanol-responsive gene of methylothrophic yeast. The mature IGF-1 is secreted as a fusion protein; IGF-1 is fused to an appropriate signal peptide via one or more processing sites which are recognised by methylothrophic yeast proteases. See also AAQ23300-2.
 XX (Updated on 25-MAR-2003 to correct PA field.)

Query Match 100.0%; Score 385; DB 2; Length 71;
 Best Local Similarity 100.0%; Pred. No. 2.8e-33;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 GPETLCGAEIYDVALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRY 60
 Db 2 GPETLCGAEIYDVALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRY 61

OY 61 CAPLKPAKSA 70
 Db 62 CAPLKPAKSA 71

RESULT 35
 AAG62611 standard; protein; 71 AA.
 XX AAG62611;
 AC AAG62611;
 XX 06-SEP-2001 (first entry)
 DT Human insulin-like growth factor 1.
 XX Human; insulin-like growth factor 1; IGF-1; neuronal damage prevention;

KW central nervous system insult; hypothermia; neuroprotective;
ischaemia cerebrovascular disease.

XX Homo sapiens.

OS WO200137855-A2.

PN 31-MAY-2001.

XX 26-OCT-2000; 2000WO-US041591.

XX 27-OCT-1999; 99US-0161798P.

PR (CHIR) CHIRON CORP.

XX Gluckman PD, Guan J, Gunn AJ;

XX WPI; 2001-355748/37.

XX Preventing or treating neuronal damage of the central nervous system,

PT comprises modulating the cerebral temperature and administering a

PT neurological therapeutic agent.

XX Claim 6; Page 40; 41pp; English.

XX The present invention describes a method of preventing or treating

CC neuronal damage following a central nervous system insult, involving

CC modulating the cerebral temperature and administering a neurologic

CC therapeutic agent. The agent may be a growth factor, such as fibroblast

CC growth factor (FGF) or insulin-like growth factor (IGF). The method is

CC particularly useful in the treatment of ischaemia cerebrovascular

CC disease. The present sequence is the human IGF protein

XX Sequence 71 AA;

XX Query Match 100.0%; Score 385; DB 4; Length 71;

XX Best Local Similarity 100.0%; Pred. No. 2.8e-33;

XX Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPEILCGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60

Db 2 GPEILCGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 61

QY 61 CAPLKPAKSA 70

Db 62 CAPLKPAKSA 71

RESULT 36

AAR63194

ID AAR63194 standard; protein; 72 AA.

XX AAR63194;

XX 13-JUL-1995 (first entry)

XX Insulin-like growth factor-1.

XX IGF-1; insulin-like growth factor; recombinant production;

XX expression vector pHT-hEGF-R-X.

XX Homo sapiens.

XX JF06253862-A.

XX 13-SEP-1994.

XX 01-MAR-1993; 93JP-00062455.

XX 01-MAR-1993; 93JP-00062455.

XX (HGET) HIGETA SHOYU KK.

XX

DR WPI; 1994-329004/41.

XX N-PSDB; AAQ77682.

PT Expression vector pHT.hEGF.R.X and microorganism contg. it - is useful

XX for expression of foreign gene.

XX Example 1; Fig 13; 17pp; Japanese.

XX The expression vector pHT.hEGF.R.X comprises the erythromycin resistance

CC gene, a bacterial protein secretion coding sequence, a sequence coding

CC for hEGF, a protease recognition sequence (R) and a sequence coding for a

CC desired heterologous protein (X). The vector is used to transform

CC Bacillus brevis hosts for recombinant production of the heterologous

CC protein, e.g. IGF-1

XX Sequence 72 AA;

XX Query Match 100.0%; Score 385; DB 2; Length 72;

XX Best Local Similarity 100.0%; Pred. No. 2.9e-33;

XX Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPEILCGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60

Db 3 GPEILCGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 62

QY 61 CAPLKPAKSA 70

Db 63 CAPLKPAKSA 72

RESULT 37

AAR13759

ID AAR13759 standard; protein; 74 AA.

XX AAR13759;

XX 10-MAR-2003 (revised)

DT 21-NOV-1991 (first entry)

XX Beta-gal/IGF-1 fusion protein (II).

XX Insulin-like growth factor; fusion protein; hydroxylamine;

XX recognition site; beta-galactosidase; diabetes; cleavage.

XX Unidentified.

XX Key Location/Qualifiers

FT Peptide 1 /label= beta-gal

FT Protein 5..74 /note= "N-terminal portion"

FT /label= mature_IGF-1

XX GB2241703-A.

XX 11-SEP-1991.

XX 04-MAR-1991; 91GB-00004524.

XX 05-MAR-1990; 90KR-00002811.

XX (KOSC-) KOREA INST SCI TECH.

XX Lee YI, Kwak JW, Park HD, Young IS, Hoon KY, Sun YM;

XX WPI; 1991-269338/37.

XX N-PSDB; AAQ13569.

XX Prepn. of insulin-like growth factor 1 (IGF-1) films - by E. coli

PT transmut contg. improved expression vector, expressing fusion protein

PT cleavable with enterokinase to give Tgf-1.

XX Example 6; Page 14-15; 36pp; English.

DR WPI; 1994-329004/41.

XX N-PSDB; AAQ77682.

PT Expression vector pHT.hEGF.R.X and microorganism contg. it - is useful

XX for expression of foreign gene.

XX Example 1; Fig 13; 17pp; Japanese.

XX The expression vector pHT.hEGF.R.X comprises the erythromycin resistance

CC gene, a bacterial protein secretion coding sequence, a sequence coding

CC for hEGF, a protease recognition sequence (R) and a sequence coding for a

CC desired heterologous protein (X). The vector is used to transform

CC Bacillus brevis hosts for recombinant production of the heterologous

CC protein, e.g. IGF-1

XX Sequence 72 AA;

XX Query Match 100.0%; Score 385; DB 2; Length 72;

XX Best Local Similarity 100.0%; Pred. No. 2.9e-33;

XX Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 GPEILCGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60

Db 3 GPEILCGAELVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 62

QY 61 CAPLKPAKSA 70

Db 63 CAPLKPAKSA 72

RESULT 37

AAR13759

ID AAR13759 standard; protein; 74 AA.

XX AAR13759;

XX 10-MAR-2003 (revised)

DT 21-NOV-1991 (first entry)

XX Beta-gal/IGF-1 fusion protein (II).

XX Insulin-like growth factor; fusion protein; hydroxylamine;

XX recognition site; beta-galactosidase; diabetes; cleavage.

XX Unidentified.

XX Key Location/Qualifiers

FT Peptide 1 /label= beta-gal

FT Protein 5..74 /note= "N-terminal portion"

FT /label= mature_IGF-1

XX GB2241703-A.

XX 11-SEP-1991.

XX 04-MAR-1991; 91GB-00004524.

XX 05-MAR-1990; 90KR-00002811.

XX (KOSC-) KOREA INST SCI TECH.

XX Lee YI, Kwak JW, Park HD, Young IS, Hoon KY, Sun YM;

XX WPI; 1991-269338/37.

XX N-PSDB; AAQ13569.

XX Prepn. of insulin-like growth factor 1 (IGF-1) films - by E. coli

PT transmut contg. improved expression vector, expressing fusion protein

PT cleavable with enterokinase to give Tgf-1.

XX Example 6; Page 14-15; 36pp; English.

XX IGF-1 is expressed in the form of a fusion protein with beta-galactosidase. Since the DNA sequence corresp. to amino acid sequence Asn-Gly, which is the hydroxylamine cleavage site, is present in the portion of the DNA sequence linking beta-galactosidase with IGF-1 protein, the treatment of the expressed beta-gal/IGF-1 fusion protein with hydroxylamine permits the isolation of only the IGF-1 protein. The expression method produces IGF-1 in high yield using a simple procedure. IGF-1 can be used for controlling the blood glucose level in diabetic patients who cannot be treated with insulin for local treatment of bone fracture and for treating congenital or acquired growth failure patients. CC The hydroxylamine method (and the enzymatic method - see AAQ13568) used for cleavage of the fusion protein is more precise than the prior art use of CNBr. (Updated on 10-MAR-2003 to add missing OS field.)

XX Sequence 74 AA;
 Query Match 100.0%; Score 385; DB 2; Length 74;
 Best Local Similarity 100.0%; Pred. No. 2.9e-33;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 1 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60
 Db 5 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 64
 Oy 61 CAPLKPAKSA 70
 Db 65 CAPLKPAKSA 74

RESULT 38
 AAR41776
 ID AAR41776 standard; protein; 75 AA.
 AC AAR41776;
 XX 25-MAR-2003 (revised)
 DT 25-MAR-1994 (first entry)
 XX Modified hIGF-I.
 XX Human; insulin-like growth factor; hIGF-I; reading frame;
 KW secretory signal; transcription; regulation; vector; host cell; yeast;
 XX IGF-II; "pre"-IGF.
 OS Homo sapiens.

XX Key Location/Qualifiers
 FH Peptide 1. .5
 FT /note= "Pre-peptide"
 FT Protein 6. .75
 FT /note= "hIGF-I"
 XX EP561137-A1.
 XX 22-SEP-1993.
 XX 13-APR-1984; 93EP-00101654.
 XX 25-APR-1983; 83US-00487950.
 PR 13-APR-1984; 84EP-00104175.
 XX (CHIR) CHIRON CORP.

XX Barr PJ, Merryweather JP, Mullenbach G, Urdea MS;
 XX WPI; 1993-296480/38.
 DR N-FSDB; AAQ48494.
 XX Prodn. of human IGF in unicellular host cells, used as a biologically active medication - by joining IGF genes to a secretory leader and processing signal sequences recognised by host then introducing vector into cells for growth.

XX Example; Page 5; 30pp; English.
 XX This sequence represents a modified human insulin-like growth factor I (hIGF-I). This sequence also includes a pre-sequence encoded by yeast preferred codons, as is the rest of the gene. The DNA encoding this sequence was joined in proper reading frame with a secretory leader and processing signal sequences recognised by host cells to form a structural gene downstream from and under the transcriptional regulatory control of a transcription initiation region in a vector compatible with the chosen host cells. The prepared vector may be used in the efficient production of hIGF-I by unicellular host cells, esp. yeast. Mature human IGF-I and IGF-II (see also AAQ48492-93) produced in this manner may be used in medicaments. The synthetic coding sequence, pref. containing host preferred codons, is joined in the same reading frame to secretion and facilitates purification. (Updated on 25-MAR-2003 to correct PN field.)
 CC (Updated on 25-MAR-2003 to correct PF field.) (Updated on 25-MAR-2003 to correct PR field.)

XX Sequence 75 AA;
 Query Match 100.0%; Score 385; DB 2; Length 75;
 Best Local Similarity 100.0%; Pred. No. 3e-33;
 Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 1 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 60
 Db 6 GPETLCGAEIYDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLLEY 65
 Oy 61 CAPLKPAKSA 70
 Db 66 CAPLKPAKSA 75

RESULT 39
 AAR13758
 ID AAR13758 standard; protein; 76 AA.
 AC AAR13758;
 XX 10-MAR-2003 (revised)
 DT 21-NOV-1991 (first entry)
 XX Beta-gal IGF-1 fusion protein (I).
 XX Insulin-like growth factor; fusion protein; enterokinase;
 KW recognition site; beta-galactosidase; diabetes; cleavage.
 OS Unidentified.

XX Key Location/Qualifiers
 FH Peptide 1
 FT /label= beta-gal
 FT /note= "representing N-terminal portion"
 FT Region 2. .6
 FT /label= linker
 FT Protein 7. .76
 FT /note= "enterokinase recognition site"
 FT /label= IGF-1
 FT /note= "mature"

XX GB2241703-A.
 XX 11-SEP-1991. 91GB-00004524.
 XX 04-MAR-1991; 90KR-00002811.
 XX 05-MAR-1990; 90KR-00002811.
 XX (KOSC-) KOREA INST SCI TECH.
 XX Lee YI, Kwak JW, Park HD, Young IS, Hoon KY, Sun YM;

WPI: 1991-269338/37.
N-PSDB; AAQ13588.

Prepn. of insulin-like growth factor 1 (IGF-1) films - by E. coli transformant contg. improved expression vector, expressing fusion protein cleavable with enterokinase to give TGF-1.

Example 3; Page 11-12; 36pp; English.

IGF-1 is expressed in the form of a fusion protein with beta-galactosidase. Since the DNA sequence corresp. to amino acid sequence (Asp)4-Lys, which is the enzyme enterokinase recognition site, is present in the portion of the DNA sequence linking beta-galactosidase with IGF-1 protein, the treatment of the expressed beta-gal/IGF-1 fusion protein with enterokinase permits the isolation of only the IGF-1 protein. The expression method produces IGF-1 in high yield using a simple procedure. IGF-1 can be used for controlling the blood glucose level in diabetic patients who cannot be treated with insulin, for local treatment of bone fracture and for treating congenital or acquired growth failure patients. The enzymatic method (and hydroxylamine method - see AAQ13569) used for cleavage of the fusion protein is more precise than the prior art use of CNBr. (Updated on 10-MAR-2003 to add missing OS field.)

Sequence 76 AA;

Query Match 100.0%; Score 385; DB 2; Length 76;
Best Local Similarity 100.0%; Pred. No. 3e-33;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

1 GPFTLCGAEIVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRLEYM 60
7 GPFTLCGAEIVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRLEYM 66

61 CAPLKPAKSA 70
67 CAPLKPAKSA 76

SULT 40
P81213

AA81213 standard; protein; 78 AA.

AA81213;

25-MAR-2003 (revised)
07-DEC-1990 (first entry)

Insulin-like growth factor-I (Fra-B-11-Fra-A-4).

Insulin-like growth factor-I; Fra-B-11; Fra-A-4; protease cleavage; methionine-insulin-like growth factor I; gamma-interferon; linker DNA; two-cistronic Met-IGF-1 expression vector.

Synthetic.

EP264074-A.

20-APR-1988.

08-OCT-1987; 87BP-00114733.

09-OCT-1986; 86JP-00240702.

09-OCT-1987; 87JP-00255818.

(FUJI) FUJISAWA PHARM CO LTD.

Ikuo U, Mineo N, Yoshimasa S, Yoshinori I, Tadashi K;

WPI; 1988-106856/16.
N-PSDB; AA81574.

Prepn. of methionine-insulin-like growth factor I - comprises use of

PT recombinant DNA expression vector as transformant in Escherichia coli.
XX PS Disclosure; Page 7; 57pp; English.

XX CC A two-cistronic vector functional and replicatable in E. coli, which essentially contains DNA encoding IGF-1 and a protective peptide capable of preventing the cellular proteases from decomposing IGF-1 was constructed. The DNA fragment (Fra-A-7) (AA81580) useful in the construction of the two-cistronic IGF-1 expression vector was prepared as follows. Fra-B-4 (AA81567) was ligated into the large EcoRI-BamHI restriction site of plasmid pTRPE7 to form pLHtrp encoding trp promoter CC I and LH. IGF-1-encoding gene was prepared by digesting pBR322 with EcoRI CC and BamHI and ligating the fragment Fra-B-10 (ON81573) to form pSdm1. CC From plasmid, EcoRI-BamHI restriction fragment encoding IGF-1 was CC isolated and to which fragment was ligated oligonucleotides m1 and m2 to CC form Fra-B-11. Fra-B-11 was ligated into HindIII-BamHI fragment of pLHtrp CC to form pLHsdMtrp. See also AA81565-82. (Updated on 25-MAR-2003 to CC correct PR field.) (Updated on 25-MAR-2003 to correct PA field.)

XX SQ Sequence 78 AA;

Query Match 100.0%; Score 395; DB 1; Length 78;
Best Local Similarity 100.0%; Pred. No. 3.1e-33;
Matches 70; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GPFTLCGAEIVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRLEYM 60
Db 9 GPFTLCGAEIVDALQFVCGDRGFYFNKPTGYGSSRRAPQTGIVDECCFRSCDLRRLRLEYM 68

Qy 61 CAPLKPAKSA 70
Db 69 CAPLKPAKSA 78

Search completed: February 25, 2004, 06:22:31
Job time : 55.0949 secs